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Gasoline Advances More Than Crude Oil

Highest production in 1931, week ending Aug. 8, average daily output 2,551,807 bbls. Peak of U. S. production, week ending Aug. 24, 1929, average 2,975,435 bbls.

Refiners and Producers Should Exert Every Effort to Prevent Overproduction to Further Strengthen Situation

By Andrew M. Rowley

Lowest daily average crude oil production in the United States during 1931 was for week ending Sept. 5 with average output of 1,736,007 bbls.

Increases in the prices of crude oil made effective this month have been more than absorbed by resulting higher prices for gasoline in the Mid-Continent area and have been equalized by better prices for gasoline in the Gulf Coast and Atlantic Coast territories. In fact, the gasoline market in the Mid-Continent area this week is stronger and prices are higher than they have been for fifteen months, with the exception of one week last August.

It is especially important at this time, in view of the opposition to recent crude oil price increases, that every refiner and crude oil producer do his part to maintain the stability of the situation and prevent an overproduction of either crude oil or gasoline. The present price trend most certainly justifies the crude oil price advances. This trend is due to the fact crude oil production has been held below requirements and the better gasoline prices have resulted from the fact there is a ready market for the quantity of the product offered for sale. A surplus of supply of either the raw material or finished product could change the situation almost overnight. Those who desire to see the present price levels maintained and further strengthened should make it their business to see that no companies or individuals take advantage of the better prices to overproduce either crude oil or gasoline.

The increase in crude oil production in Oklahoma was due to operators' making their monthly allowable production during the first part of the period. There probably will be a decline of 40,000 barrels daily or more in the State's output this week. The situation in California is not satisfactory either from the standpoint of crude oil production or gasoline markets. Efforts are being made to iron out the situation there.

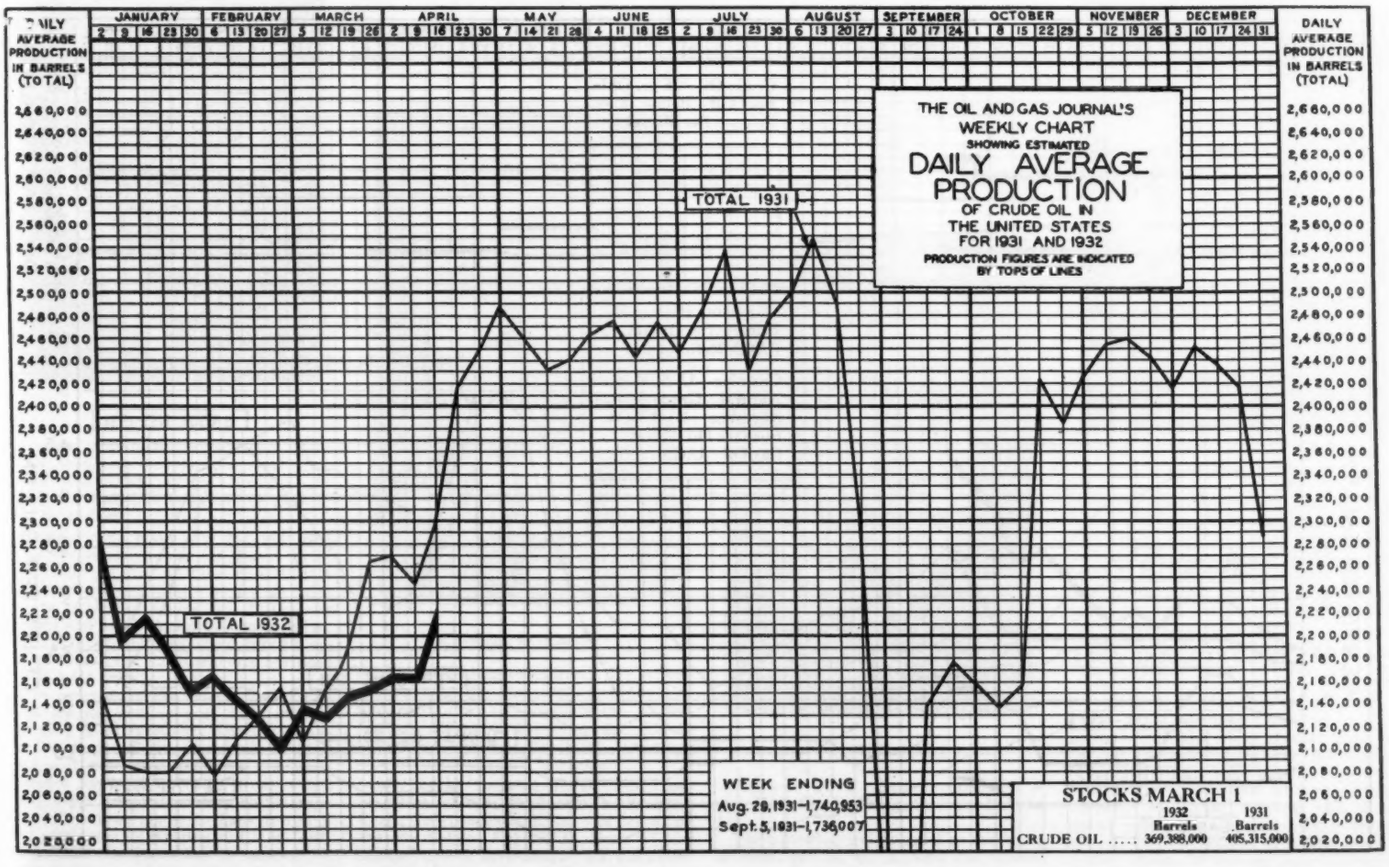
Better motoring weather throughout the country is stimulating consumption and general conditions should continue to show improvement. A new allowable, per well, in East Texas, will tend to hold production there to or below the figure of 325,000 barrels daily generally expected from that area. Consumption will increase to a greater extent than crude oil production.

PRODUCTION IN THE UNITED STATES

Estimated daily average production of crude oil in the United States for the week ending April 9, and a comparison with the previous week follows:

	April 9	April 2
Oklahoma—		
Oklahoma City	128,160	83,120
Seminole-St. Louis	118,145	119,425
Remainder of State	205,430	205,070
Total Oklahoma	451,735	407,615
East Texas—		
Kilgore	105,285	103,179
Lathrop	124,294	121,354
Joiner	107,990	106,518
Total East Texas	337,569	331,051
West Texas	178,420	181,735
North Central Texas	74,215	74,152
Texas Panhandle	46,855	47,194
East Central Texas	55,190	55,143
Gulf Coast Texas	106,050	105,387
Southwest Texas	65,215	69,236
Total	863,514	863,898
Kansas	97,510	96,715
North Louisiana	28,170	28,350
Gulf Coast Louisiana	31,675	30,585
Arkansas	34,995	34,900
Eastern fields	115,000	113,000
Rocky Mountain area	86,717	86,142
California—		
Santa Fe Springs	66,000	65,250
Long Beach	80,000	79,500
Playa Del Rey	18,500	19,150
Elwood	17,750	16,500
Kettleman Hills	59,500	63,000
Remainder of State	273,250	254,100
Total California	515,000	497,500
Total United States	2,224,316	2,158,705

→ Increase, 65,611 Bbls. Daily ←



Refinery Prices Advance With Crude

Gasoline, Kerosene and Bright Stock Feature Improved Market. Future Depends Upon Holding Down Crude Runs

By W. T. Ziegenhain

Sinclair Refining Co. announced a 1-cent increase in gasoline tank wagon and station prices throughout its Midwest marketing territory, effective April 14.

The Oklahoma (Group 3) refined oil market took on a new spirit as doubts of the success of the 15-cent crude advance posted by the Continental Oil Co. more than a week ago were eliminated by the posting Monday of higher prices by all major buyers. Then, as the result of indications that the Standard Oil Co. would post a 1-cent advance in the gasoline tank wagon and filling station prices in a few days, the higher refinery gasoline prices seemed well fortified. Kerosene also featured the market and moved to a new high for a period of more than a year. Natural gasoline continued to be traded within a narrow price range and although prices were fractionally higher, the improved market seemed to be the result of the better refinery gasoline market and not because there was any scarcity of natural gasoline. Bright stocks featured the lub oils and prices were advanced 2 cents by all Mid-Continent manufacturers.

This "new" spirit referred to is really not new to the industry, but sales managers have not had a chance to "sell at a profit" for so long, the present determination to do so seems new. Along with this determination on the part of sales managers comes the supporting facts that refiners are not seriously boosting crude runs as has been the case in years past when the increased seasonal demand came into reach and also, several important refiners have definitely entered the spot market to purchase gasoline and other products at any time distress material is offered. These refiners have curtailed their own runs and are in a position to handle a substantial quantity of material. They are also planning to extend their purchases over a period of another month. Furthermore, it is not the plan of sales managers to force gasoline prices and other prices to unreasonable heights. Their objective is simply to raise them to a profitable level. As yet, the refined oil market has not moved to that point and manufacturers say they will have to establish a minimum price of 5 cents for motor gasoline to equalize the crude advance and bring their operations into the black.

In the matter of crude runs it is interesting to note that Mid-Continent refiners have adopted a schedule calling for the running of only 420,000 bbls. daily during April. This is but 18,000 bbls. more than was run last month and is 80,000 bbls. less than the schedule a year ago. The policy of refiners in regard to crude runs over the next six months seems to be the key to the market's future. If gasoline prices are held to a reasonably profitable basis and crude runs are kept to refined oil market demands those who refer to the current crude price advance as "premature" may decide they were wrong. However, if this advance encourages refiners to boost crude runs, reopen shutdown plants and attempt to boost prices by withholding their production from the market simply to create high prices, we could easily move into July with burdensome stocks and the old story of dumping would be repeated once again.

REFINED MARKET BAROMETER

New strength was given the general refined oil market during the past week by the posting of high Mid-Continent crude prices by all major buyers and further, by the rather definite indications that a general advance in the tank wagon and station prices on gasoline and kerosene will be made by the Standard Oil Co. of Indiana within a few days. California is the only refining point which has not shared in the better sentiment and this has been caused by the weak retail gasoline market there. Unusual strength has been shown in the Mid-Continent in gasoline, kerosene and bright stock. The slow demand for natural gasoline has not encouraged raising prices in proportion to the advance in refinery gasoline.

Fuel oil prices remained steady in all areas due to the Mid-Continent crude advance and particular interest is manifested in the fuel market along the East Coast pending the outcome of the federal Government's proposal to place an import duty on crude.

Mid-Continent—Gasoline, kerosene and bright stocks advanced. Other products are firmly held.

Chicago—Believing a general tank wagon advance imminent throughout the Standard Oil Co. of Indiana territory, gasoline is being quoted at higher prices. Kerosene is scarce.

California—Prices on light oils remain unchanged while slight recessions are noted in fuel oil, gas oil and neutrals.

Pennsylvania—Gasoline advanced fractionally and other products firm.

Gulf Coast—Higher Gulf Coast crude prices prompted an improvement in the refined oil market with gasoline and fuel oils fractionally higher.

Gasoline

It was difficult to establish a close range for pricing U. S. Motor gasoline on Tuesday because the general market was unsettled following the action of the Humble Oil & Refining Co. in meeting the crude advances and in view of a tank wagon price advance by the Standard Oil Co. of Indiana. Another factor which keeps the refinery gasoline motor market muddy is the constantly appearing superstabilized natural gasoline selling at prices below those generally quoted by refiners for even low octane motor fuel. With the Continental Oil Co., the Marathon Oil Co. and others buying some motor gasoline on the spot market to fill their needs, even those small refiners who have been identified as "low sellers" in past months have gone to a minimum of 4½ cents as their price for low octane motor fuel. The Oklahoma City gasoline which appeared as low priced material in the spot market during the past month has been absorbed and 4½ cents may be stated as the lowest motor fuel price on material moving to consumers. The higher octane gasoline continues to enjoy from one-half cent to three-fourths cent premi-

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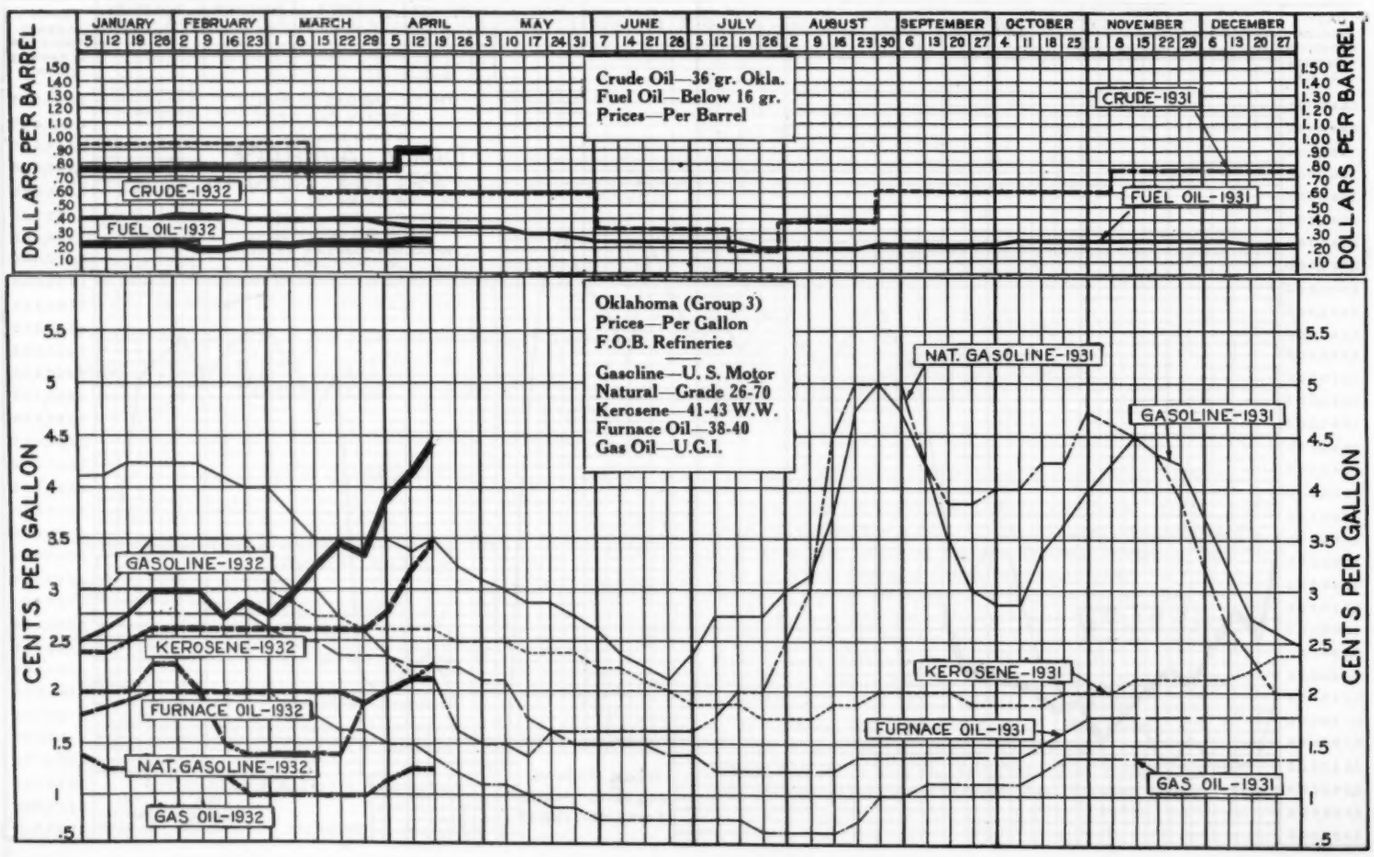

To Pay More Attention to Marketing

Keynote of W.P.R.A. Annual Meeting Is Profitable Prices Through Sound Marketing Practices. Discuss Position of Third Grade Gasoline

By C. O. Willson

EXCELSIOR SPRINGS, Mo., Apr. 8. The marketing of petroleum products is to receive more attention from major executives during the coming year than ever before in the history of the industry if the attitude apparent here during the three-day annual meeting of the Western Petroleum Refiners Association is any criterion of other sections of the country.

Attended by the heads of a number of the larger Mid-Continent and Middle West companies who do not ordinarily interest themselves in the details of group activities, the general sessions of the convention developed into a discussion of the reasons and cures for chaotic conditions commonly conceded to prevail in all phases of petroleum marketing.

From the final address of the retiring president, L. R. Crawford, which opened the general meeting on Thursday, to the closing remarks of George D. Locke, the newly elected head of the association, the point was stressed that too little attention was being paid by the head executives of both large and small companies to marketing problems.

"The production of crude oil is now definitely under control, the refining branch has shown substantial improvement, and it now remains to remedy conditions existing in the distribution of products," Mr. Crawford said.

"Let our slogan for the coming year be 'a barrel of products sold at a profit rather than two barrels at a loss'," Mr. Locke said today as he brought the twentieth annual meeting of the association to a close.

H. T. Ashton

It was made plain that the improved crude oil situation and the better products made by the refining departments will have no significance so far as profits are concerned unless fair prices can be obtained at the point of consumption. Failure to do this was held largely accountable for the unsatisfactory earnings of the past year.

The program of the association as outlined for the coming year calls for the centering of attention on devising means for the more orderly marketing of Mid-Continent petroleum products commonly conceded to be the center from which many of the troubles of distribution emanate. This program is to have full support of the major refining units not only in the Mid-Continent but in competitive areas.

During the general sessions held Thursday afternoon and Friday, the ills of the industry, in so far as they relate to the distribution of petroleum products, were discussed from the spot market in Oklahoma (Group 3) to the menace of higher gasoline taxes, with particular reference to the ever-widening menace of tax evasion. F. V. Martinek of the Standard Oil Co. of Indiana brought new revelations covering the activities of the gasoline bootlegger throughout the Mid-Continent and Middle West. He declared that the spread of bootlegging by tearing down the price structure of wholesale and tank car markets threatened the well-being of the entire industry. He explained the work of the central committee of several middle western states of which he is chairman and called upon members of the association to co-operate in every way possible in the elimination of gasoline tax evasion. Supplementing Mr. Martinek's talk, Judge J. H. Hill, attorney for The Texas Company, stressed the significance of increased gasoline tax rates both in the matter of evasion and its tendency to decrease consumption of motor fuels. Judge Hill has had a prominent part in the fight to prevent higher rates in Oklahoma and is also active in the efforts being made to reduce tax evasion to a minimum. He pointed to actual cases in which the increase in tax rate, which now amounts to from 15 to 50 per cent of the retail price, had reduced consumption.

Remedies Suggested

Marketing practices, which are responsible for the present demoralized and unprofitable price structures in the sale of refinery products, were aired this morning by speakers. Although there was some criticism of certain types of brokerage transactions, the general attitude of those present was that the real cause of the troubles, and the remedies, lie with the refiners themselves. The practice of "dumping" excess products whether direct or through brokers was condemned. The weakening effect on the market of selling one-fourth or three-eighths of a cent per gallon under the published quotation on gasoline was also stressed. More activity in the open tank car sales so that it can more accurately reflect actual market conditions was urged.

The necessity of gauging consumer requirements and then curtailing refinery operations to the point where no excess material will accumulate was pointed out as a fundamental plan which must be accomplished before there can be any lasting improvement in marketing. In this connection R. W. McDowell, vice president of the Mid-Continent Petroleum Corp., said that the industry must reconcile itself to a decrease of 3 or more per cent in domestic demand for gasoline this year over last. This statement is in line with those made here by sales heads of other companies whose predictions are based on the experience of the first three months of this year. In some sections it was stated that the decline in domestic demand would be more than 10 per cent. Mr. McDowell's prepared address, which contained specific recommendations for the improvement in retail marketing practices, is published elsewhere in this issue.

Third Grade Gasoline

Although the marketing of a third grade gasoline at filling stations, a practice which has been adopted in all parts of the country over the past year, was not condemned by any of the speakers, certain dangers were pointed out with some disagreement as to policies to be followed in handling the third-grade business. R. R. Irwin, president of the White Eagle Oil Corp., Kansas City, led the discussion and pointed out that the sole purpose of the third grade was to permit larger units to compete with price cutters. He was not in favor of the tendency to improve the quality of this third grade which meant increased manufacturing costs with no offsetting advantage in marketing profit.

C. L. Henderson

Mr. Irwin expressed the opinion that the original plan of coloring the third grade "blue" was unfortunate in that it permitted the price cutter to offer a white grade of inferior quality in competition with the white regular grade of the larger distributors. His corporation is now offering a white grade at its third pumps to cope with this situation. Other speakers said that offering two white grades at the same station tends to reduce the sales of the regular or second grade.

Mr. Irwin, in summarizing his views

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GEO. D. LOCKE NEW PRESIDENT WESTERN REFINERS ASSOCIATION

EXCELSIOR SPRINGS, Mo., Apr. 8. George D. Locke, active in Mid-Continent refining and marketing circles for many years, was elected president of the Western Petroleum Refiners Association at the final session of the twentieth annual convention which closed here today. Mr. Locke has served the association as vice president for several years and his unanimous election to the presidency for the coming year followed the recommendation of the nominating committee. He is vice president of the Barnsdall Refining Co. and maintains his headquarters at the Chicago offices of the company. He is a frequent visitor to the Tulsa headquarters of the Barnsdall interests.

George D. Locke

Mr. Locke succeeds L. R. Crawford, president of the Producers & Refiners Corp., Independence, Kans. In behalf of the association, Fayette B. Dow, Washington counsel, presented to Mr. Crawford a chest of table silver and a wrist watch in token of appreciation for his two years of service as head of the association's activities.

Mr. Locke, in his opening talk to the membership, made a plea for the active support of the association's program for the coming year which will be in active charge of Howard Bennette, managing director; A. V. Bourque, secretary, and other members of the Tulsa staff.

All parts of the Mid-Continent and the Middle West are represented in the election of the following vice presidents: H. T. Ashton, vice president, Lubrite Refining Co., St. Louis, Mo.; E. J. Marston, president, Texas Pacific Coal & Oil Co., Fort Worth, Tex.; C. L. Henderson, vice president, Vickers Petroleum Co., Wichita, Kans.; T. H. Barton, president of the Lion Oil Refining Co., El Dorado, Ark.

T. H. Barton

The following were elected to the board of directors: R. G. A. Van der Woude,

(Continued on Page 54)

Economic Necessity of Higher Octane Number Is Believed Doubtful

* * * * * *

By B. E. Sibley
Chief Technologist, Continental Oil Co.*

THE problem of antiknock ratings of gasoline now popularly referred to as the "octane number" is a serious matter with the refiner as well as the automotive manufacturers, says the writer of this paper. It may appear to some that the refiners are faced with a race involving higher octane ratings of gasoline, which would, of course, increase the cost of manufacture, resulting in considerable expensive equipment being transferred to the junk pile, entailing the expenditure of much money in revamping refinery plants to produce the higher octane number gasolines which they believe will be demanded.

The practical question to be considered refers to the basis for this view toward higher octane numbers. We may question if this race for higher octane numbers should be truly considered as a demand for higher antiknock gasoline, or has the word "octane" become involved in the vocabularies of the salesmen who wish to use a high-sounding term which has caught the public ear. Recent developments in engine design reveal that through simple changes in materials used, it is quite practical to produce an engine with a compression ratio of 6½ to 1, in which white gasoline may be used without knocking. One of the prominent manufacturers in his line of 6 and 8-cylinder cars is using a 6.5 to 1 compression ratio in engines equipped with aluminum cylinder heads. The aluminum cylinder head promotes greater dissipation of heat, which lowers the temperature of the compressed charge. Operating these engines reveals a great deal in connection with performance that should not be overlooked before definitely engaging in a race for higher octane numbers or approving expenditures in such activity.

Referring to the question, "Is there a real need for higher octane numbers?" it is believed we should view the question, "Is there an economic necessity for higher octane numbers?"

Reviewing the trend of car design and demand with regard to the influence on the character of the fuel which will be required by the car of 1932 and in the immediate future, it is safe to assume that the motorist will continue to demand increasingly greater performance and that the fuel of the future will be used in a car capable of traveling at higher speeds with greater acceleration and smoothness. These desirable characteristics must be secured without an accompanying increase in the cost of transportation. Conditions necessitate that the car of the future shall be an economical car.

Responsibility points to the need of seriously considering the trend of automotive design to determine the lines along which the major developments are likely to occur and ascertain those which will be likely to affect the manufacturer of automotive fuel.

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A car with maximum performance is one that will produce maximum speed and acceleration with the greatest possible smoothness of operation. The continuously improving road conditions promote and permit higher speeds and a public

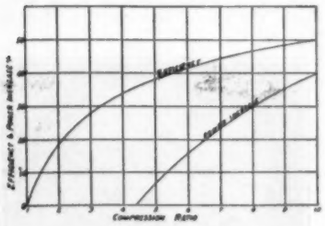


Figure 1—Effect of compression ratio on power.

demand for rapid transportation which undoubtedly is fostered to some extent by the development of aviation. A car attains its maximum speed when the power available just equals the combined rolling and wind resistance. Reducing wind resistance has been given recognition in advanced body design. As an example of the importance of wind resistance Sir Denniston Burney has shown that at 35 m.p.h. the wind resistance of a conventional car is equal to its rolling resistance. Since the speed of the average car today is in excess of 35 m.p.h., it follows that the principal factors affecting the attainment of maximum speed are power and wind resistance.

Motorist Insists on Comfort

Other factors being comparable, acceleration is dependent upon the ratio of power to weight. Smoothness or freedom from vibration affects not only the life of the vehicle, but is of importance to the motorist who takes the longer drives at higher speeds than ever before and insists upon being comfortable. This demand upon the part of the motorist has been the basis of many major improvements in automotive design such as multi-cylinder engines, rubber mounting, shock-absorbing devices, etc. Smoothness depends primarily upon many features of engine and chassis design which have little bearing upon fuel characteristics, but it is also intimately affected by such factors as rate of pressure rise in the engine cylinder and the presence or absence of detonation, the latter being related to the fuel problem.

Comparison of Change

Figure 1 shows the calculated thermal efficiency for the Otto-cycle for various compression ratios. This curve is the same as the familiar air-cycle efficiency curve, except that the exponent for adiabatic expansion has been taken as 1.3 (Heidt—The Gasoline Motor) which is more nearly correct for conditions of practice. This curve shows the maximum that may be obtained.

The lower curve shows the increased power that might be expected from the greater efficiency which results from increased compression ratio. The average compression ratio for the year 1927 (4.38) is taken as the basis or 100 per cent. The manner in which this average value was arrived at will be explained later in describing Figure 2.

Efficiency and performance are improved by higher compression ratios, other details of design being comparable.

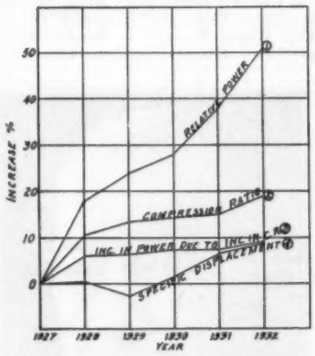


Figure 2—Trends in motor design for past five years.

Figure 2: In order to arrive at a fair picture of the trend of automotive design it was necessary to adopt some system in the selection of data. Several avenues of approach were open; for, example, the data on all makes of cars could be simply averaged. This would give a good picture as to the data on design, but would have little bearing on the elements entering into the fuel situation, because on this basis the more expensive cars of which there are relatively few sold would have equal value with popularly priced cars.

On the other hand, if the above figures were weighted in proportion to the number of cars sold the picture would be largely that of the very few makes represented by the "price" cars.

It was finally decided to take on an equal basis the first 10 groups by sales which represent from 80 to 92 per cent of all passenger cars during the period under consideration. From year to year there would be one or two makes on which complete data would not be available and which might conceivably slightly affect one or more curves for that year. Therefore, these curves should be interpreted as showing trends over the period, but the data for any one year should not be taken as being absolutely correct.

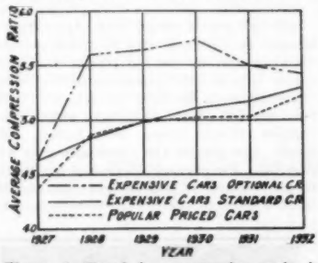


Figure 3—Trend in compression ratio in different priced cars.

During the period 1927 to 1932 the average developed horsepower of the cars under consideration rose approximately 60 per cent. However, not all of this increased power was available for increased performance as the weight of the cars also increased. In order to obtain more exactly the result of increased power the increase in relative power or power available for performance, was calculated on the basis of ratio of power to weight. The increase in this ratio is shown in Curve 1 of Figure 2.

The other curves in this figure show in part the elements entering into this increase in relative power. Curve No. 2 depicts the rise in compression ratio. Since, as shown in Figure 1, power does not increase uniformly with compression ratio, the power increase that could be expected from the change in compression ratio brought out in Curve No. 2 is shown in Curve No. 3.

Increasing Displacement

Relative power can be increased also by increasing displacement. Displacement itself, however, does not tell the complete story as it must be considered with reference to weight of car, rear axle ratio, etc. To express this relationship a factor called "specific displacement" is taken as the measure. This is the displacement per unit weight of car per unit distance moved. The relative increase in this factor is shown in Curve No. 4.

Figure 3 illustrates the trend in compression ratio during the period 1927 to 1932. The lower curve represents change in the standard compression ratio of the groups of popular priced cars under consideration in Figure 2.

The middle curve gives the average standard compression ratio of expensive cars—considered as those priced at $2,500 or above; while the upper curve represents the same group of cars having optional compression ratios offered by their manufacturers.

It will be noted the standard compression ratio of both groups show a gradual increase. However, attention is called to the fact that the three curves exhibit a tendency to converge; the compression ratios of popular priced cars seem to be approaching the standard set by the more expensive makes, while manufacturers of the higher priced cars have not in the past two years been offering optional compression ratios as high as those found in 1928 and 1929.

Figure 4: This is taken from the March 10, 1932, issue of The Oil and Gas Journal. This reveals the trend in octane numbers of the premium and regular grades of motor fuel; also, the third grade for the year 1931.

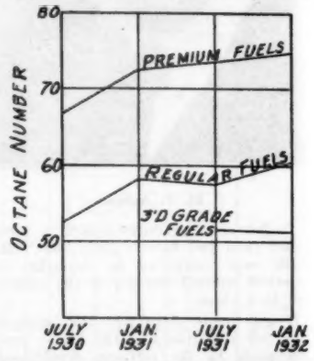


Figure 4—Trend in octane value of motor fuels.

Power and Performance

The octane number subject is closely associated with compression ratio, owing to the interpretation of compression ratios being related to the change in power and performance of our cars. The increase in engine power from 1927-1932 was approximately 60 per cent. Correcting this increased engine power for the

(Continued on Page 54)

*Delivered before Western Petroleum Refiners Association, Excelsior Springs, Mo., April 6, 7 and 8.

Refiners Hold Crude Runs to Demand

April Schedule of Operations Shows Increase, but Is Well Below That of a Year Ago. Plants Shut Down Offset Resumptions

By W. T. Ziegenhain

Mid-Continent refiners will run but 18,415 bbls. more crude daily during April than during March, despite the improved conditions of the refined oil market and the increased seasonal demand for gasoline that is bound to be felt soon. This is considered a favorable showing in the effort to hold the gasoline price to a profitable level after the large number of orders put in as the result of jobbers anticipating the crude advance have been filled.

North Central Texas and Oklahoma refiners will show the largest increase in refinery runs for April compared to those of March. Several plants will resume operations in these areas, but there has been about the same capacity shut down for the month, so the increase has been the result of a general but modest stepping up of refinery runs in the operating plants. In Kansas, Arkansas and West Texas refinery runs will show a slight decrease.

Comparing the runs of this April with those of a year ago, the outlook from a market standpoint appears very favorable. A year ago the Mid-Continent group of refiners were increasing their runs by leaps and bounds. The total estimated runs for April were scheduled at 497,391 bbls. This year the runs will be 419,750 bbls., or about 70,000 bbls. less. A year ago the April runs represented an increase of nearly 50,000 bbls. daily over those of March. This high rate of monthly increase continued last year until in August the Mid-Continent schedule reached 590,000 bbls. a day.

Refiners have received the crude advance well and are making every effort to advance gasoline prices in proportion and to place refining operations on a profitable basis, but they realize that they must hold crude runs to gasoline demands. That much of the "experimental advance" remains to be worked out.

Oklahoma Operations

Oklahoma refiners will run 147,020 bbls. of crude in April compared to 139,700 bbls. in March. This increase is caused partly by the resumption of operations in two plants but to a greater extent by the increased runs in a number of the more important plants. Two plants have temporarily suspended operations and this has tended to equalize the effect of the other plants that resumed operations.

The plants appearing as operating which were shut down a month ago are those of the Anderson-Prichard Oil Corp. at Cyril, the Sterling Refining Co. at Oklahoma City and the York Refining Co. at Oklahoma City. The plants which were shut down in April but which operated a month ago include those of the Marathon Oil Co. at Bristow and the White Oak Corp. at Allen. The Marathon plant has been shut down pending developments in a proposed modernization program.

North Central Texas

The North Central Texas group of refiners will show the largest increase in the scheduled runs for April compared to those of March. This group will run 95,700 bbls. this month compared with 85,075 bbls. in March. This increase may be accounted for entirely by the slightly higher schedules adopted by the operating plants. One refinery which did not operate in March but which will resume operations in April, the Taxman Refining Co. plant in Wichita Falls, adds 2,000 bbls. daily to the total schedule, but this is more than equalized by the shutting down of the H. F. Wilcox Oil & Gas Co.'s plant in Tampa. The latter plant was shut down as the result of a fire late in March and the company has not decided whether to rebuild on its present location.

Included in the list of plants to resume operations in this area are those of the Iowa Park Producing & Refining Co. at Wichita Falls and the Kent Refining Co.'s plants at Angus and Minerva. One new plant has been added to the list, that of the Gratex Refining Co. at Graham. This plant has operated irregularly for several months, limiting its runs to local demands.

West Texas

The West Texas group of refiners will run practically the same volume of crude in April as in March. A large number of plants continue idle in this area and the total runs amount to only 34,350 bbls. daily. One plant will resume operations while another will be shut down for April. The plant to operate again is that of the Marathon Oil Co. at Del Rio. This plant is resuming operations on a schedule of 1,700 bbls. of crude daily. The Signal Gasoline Co.'s plant at Texon, which in reality is only a part of the company's gasoline plant, will remain idle. This plant tops local crude from time to time to take care of the gasoline plant's needs for absorption oil and does not operate as a refinery. The San Angelo Refining Co. has been purchased by the Paramount Refining Co., a local partnership.

Kansas

In the Kansas group of refiners little change is shown in the April schedule of runs compared to those of March. Total charges will be increased from 79,900 bbls. to 81,750 bbls. and this is accounted for by the increasing of the schedule of a relatively few plants. The status of the operating and shutdown plants remains the same.

East Texas

Although a small increase is shown in the runs of the East Texas group of refineries, the increase is not considered unfavorable to efforts to advance refined oil prices in the Mid-Continent. Two plants have been added to the active list since March, but their combined schedules adds but a small volume to the runs for the area. The plants resuming operations include those of the Taylor Refining Co. at Tyler and the Guillory Refining Co. at Kilgore. The latter plant was recently completed and has a topping capacity of about 300 bbls. daily.

Arkansas and North Louisiana

The Arkansas and North Louisiana groups of refineries will not alter their operating schedules materially during April compared to those for March. The Arkansas plants will run 20,500 bbls. with no change in the status of the operating and shutdown plants. The North Louisiana group will run 28,000 bbls., with no change in the status of the individual plants.

MID-CONTINENT REFINERY OPERATIONS

CRUDE RUNS TO STILLS

	1929	1930	1931	1932
January 1	508,550	535,460	478,795	405,910
February 1	506,800	519,355	470,125	411,280
March 1	514,950	531,500	449,634	401,155
April 1	530,530	555,250	497,391	419,750
May 1	577,500	574,300	510,640	.....
June 1	583,030	572,250	567,915	.....
July 1	565,800	548,475	588,840	.....
August 1	555,250	526,400	590,545	.....
September 1	552,300	498,710	588,105	.....
October 1	544,720	518,800	472,190	.....
November 1	545,473	506,700	480,440	.....
December 1	540,630	478,360	456,525	.....

OPERATIONS BY DISTRICTS

	April 1		Mar. 1	Apr. 1
District—	Dly. crude capacity (bbls.)	Dly. crude runs (bbls.)	Dly. crude runs (bbls.)	Daily increase (bbls.)
Arkansas	48,000	20,500	21,100	*600
Kansas	153,500	79,250	79,900	*650
North Louisiana	40,250	28,000	26,700	1,300
Oklahoma	309,300	147,020	139,700	7,320
North Central Texas	204,000	95,700	85,075	10,625
West Texas	139,900	34,350	34,610	*260
East Texas	79,800	14,750	14,070	680
Total	975,450	419,570	401,155	18,415

*Decrease.

REFINERY OPERATIONS IN KANSAS

(Plants which have been in operation during the past year)

Company and location—	Daily capacity	Runs Apr. 1	Runs Mar. 1
Altitude Petroleum Corp., Chanute	5,000	(*)	(*)
Barnsdall Refineries, Inc., Wichita	4,000	2,500	2,500
Derby Oil Co., Wichita	7,500	3,500	3,500
Eldorado Refining Co., Eldorado	4,500	2,500	2,700
Golden Rule Refining Co., Wichita	1,500	750	700
Kanotex Refining Co., Arkansas City	12,000	6,000	5,000
National Refining Co., Coffeyville	6,500	6,000	5,000
Phillips Petroleum Co., Kansas City	7,500	6,000	6,000
Shell Petroleum Corp., Arkansas City	22,000	14,000	14,000
Sinclair Refining Co., Coffeyville	12,000	9,000	8,000
Sinclair Refining Co., Argentine	9,500	(*)	(*)
Skelly Oil Co., Eldorado	23,000	10,000	10,000
Standard Oil Co. of Kansas, Neodesha	20,000	6,000	6,000
Vickers Petroleum Co., Potwin	3,500	2,000	1,500
White Eagle Oil Corp., Augusta	15,000	13,500	15,000
Total	153,500	81,750	79,900

*Shut down.

REFINERY OPERATIONS IN ARKANSAS

(Plants which have been in operation during the past year)

Company and location—	Daily capacity	Runs Apr. 1	Runs Mar. 1
James H. Berry & Sons, Waterloo	2,000	1,000	1,000
Henry H. Cross Co., Smackover	6,000	4,000	4,000
Houston Oil Co., Camden	6,000	(*)	(*)
Kettle Creek Refining Co., Pearson	5,000	2,000	2,000
Lion Oil & Refining Co., El Dorado	12,000	4,300	4,000
Macmillan Petroleum Products Co., Norphlet	2,000	2,000	2,000
Ouachita Valley Refining Co., El Dorado	2,000	700	1,200
Root Refining Co., El Dorado†	10,000	4,000	4,000
Simms Oil Co., Smackover	3,000	2,500	2,900
Union Asphalt Co., El Dorado†	.....	.....	.....
Total	48,000	20,500	21,100

*Shut down. †Reduces residuum purchased from Lion Oil & Refining Co., no crude run.

REFINERY OPERATIONS IN EAST TEXAS

(Plants which have been in operation during the past year)

Company and location—	Daily capacity	Runs Apr. 1	Runs Mar. 1
Arrow Refining Co., Overton	2,500	(*)	(*)
Beacon Oil & Refining Co., Henderson	2,500	1,000	1,000
Boone Refining Co., Arp	500	800	500
Central Refining Co., Friars Switch	10,000	(*)	(*)
Constantin Refining Co., Overton	3,000	(*)	(*)
Diamond Refining Co., Overton	3,000	500	300
East Texas Refining Co., Friars Switch	6,000	(*)	(*)
East Texas Refining Co., Longview	10,000	9,200	9,000
Gladetex Refining Co., Gladewater	500	300	300
Gladewater Refining Co., Gladewater	1,000	400	370
Guillory Refining Co., Kilgore	200	100	.....
W. B. Mackey Co., Gladewater	500	(*)	(*)
Kilgore Refining Co., Kilgore	1,500	400	500
Overton Refining Co., Overton	3,500	750	600
Petroleum Refractionating Co., Longview	10,000	(*)	(*)
Sinclair Refining Co., Camps Switch	5,000	500	1,000
Southern Oil & Refining Co., Kilgore	2,500	200	500
Slack Petroleum Co., Willow Springs	2,500	(*)	(*)
Taylor Refining Co., Tyler	15,000	700	(*)
Total	79,500	14,750	14,070

*Shut down.

REFINERY OPERATIONS IN NORTH LOUISIANA

(Plants which have been in operation during the past year)

Company and location—	Daily capacity	Runs Apr. 1	Runs Mar. 1
Bayou State Refining Co., Hosston	750	(*)	(*)
Louisiana Oil Refining Co., Shreveport, Bossier	19,000	18,500	17,700
Spartan Refining Co., Shreveport	10,000	6,000	6,000
Stanolind Oil & Gas Co., Superior	3,500	3,500	3,000
The Texas Company, Shreveport	7,000	(*)	(*)
Total	40,250	28,000	26,700

*Shut down.

(Continued on Page 64)

East Texas Equipment Requirements

Discussion of Trend of Developments of Pumping Apparatus and Accessories for Securing Future Production

By John A. Ritter and Blaine Johnson*
Chief engineer, Sun Oil Co., and superintendent of production, Simms Oil Co.

Attempts to analyze any phase of the East Texas operation have been little short of guesswork. We might even overlook the magnitude of the area involved, the admittedly different types of wells encountered, and make a fairly sound analysis of pumping equipment requirements, if we could by any stretch of our imagination assume that East Texas pumping procedure will be similar to that adopted in other recently developed areas. This assumption is by no means a safe one. Opinions on this subject which have been solicited from various informed sources are as conflicting and divergent as past opinions regarding other phases of the East Texas operation. The discovery well was drilled in October, 1930. For the first few weeks little development took place. As soon as it became apparent that a real productive area had opened, the development rapidly increased. The following production figures during the year 1931 show this:

Week ending—	No. wells	Av. daily prod. bbls.	Weekly prod. bbls.
Jan. 7, 1931	5	501	3,507
Feb. 4, 1931	11	7,362	51,534
Mar. 4, 1931	34	56,037	392,259
Apr. 1, 1931	125	144,664	1,012,648
Apr. 29, 1931	337	339,777	2,378,439
May 27, 1931	610	350,893	2,456,251
June 24, 1931	975	359,727	2,515,089
July 22, 1931	1,307	504,853	3,533,971
Aug. 19, 1931	1,644	*848,398	5,938,786
Sept. 9, 1931	1,879	171,495	1,200,465
Oct. 6, 1931	2,274	403,884	2,827,188
Nov. 3, 1931	2,797	419,441	2,936,087
Dec. 1, 1931	3,291	402,233	2,815,631
Dec. 29, 1931	3,612	290,885	2,036,195

*Although this figure represents daily average for seven-day period, most of the output for the week was produced in first five days, martial law shutdown of field going into effect on morning of August 17, 1931. The field was shut down under military orders during period August 17 to September 4, 1931, inclusive.

Notice that the production reached a peak of 1,000,000 bbls. per day on August 15 before military action took place. Many wells were producing at rates limited only by the ability of the wells to produce and the ability of the operators to dispose of their production.

Nearly 1,100 wells were completed during the first six months. On August 1, 1931, the development was distributed as follows:

Districts—	Units	Wells
Henderson	469	533
Kilgore	571	629
Longview	403	298
Total East Texas	1,443	1,460

General dissatisfaction existed resulting in a complete shutdown on August 17 under martial law. Production was resumed under military regulations on September 5, 1931.

There resulted a decided increase in the drilling of wells with 172 completions recorded during the week ending October 28, 1931, and 195 new locations recorded during the week ending October 15. More than 2,500 wells were drilled during the last six months of 1931 about at the rate of 14 completions per day

The production for the year 1931 was 107,727,000 bbls.

The area involved comprises some 100,000 acres.

With more than 4,000 wells now completed, the probable ultimate yield from this Woodbine sand area is a subject for controversy. Estimates vary from 1,000,000,000 to 2,000,000,000 bbls.

The same conditions which have brought about differences of opinion concerning every phase of the East Texas operation prevent any definite agreement among operators when considering necessary pumping equipment.

Approximately 4 per cent of the wells in East Texas are now what we term pumpers. Opinions in connection with other features of the East Texas operation which were made at a time when only 4 per cent of the development had taken place, have been expressions of hope or despair rather than analysis. We can hardly expect to analyze accurately the pumping requirements at this stage of the development. Past experience has been of little assistance thus far when applied to East Texas. As an industry we are not running true to form. Our habits are changing or have already changed.

Over a 50-mile radius in East Texas radical changes have been introduced in producing practices. Experienced operators complete large wells using 5-inch, or even as small as 3-inch oil strings. Wells are being produced through 1-inch and even smaller tubing. Some of the large wells are connected to long 2-inch flow lines which in turn discharge into miniature separators. Such practices reflect a decided change of conditions or ideas or both.

Judging by analogy, it is reasonable to suppose that when East Texas wells graduate to the pumping stage, they will face a set of conditions which may possibly require pumping equipment as different from the generally accepted ideas of well pumping equipment as the present equipment on flush flowing wells is different from that in general use prior to the East Texas development.

The pumping equipment which was first installed in East Texas is quite similar to that found in other recently completed fields. It may develop that the conditions which seem to warrant a change in the equipment for flowing wells will also cause operators to consider or even adopt changed types of pumping equipment for East Texas.

Changing Conditions

The flowing history to date of one East Texas lease gives further information on these changing conditions. The first two wells on this lease were completed in April, 1931. Two short flow lines were connected to a large separa-

(Continued on Page 67)

*Before Southwestern District, A.P.I. Division of Production, Tyler, Tex., April 14.

Approve New Gasoline Specifications

W.P.R.A. Grading Recommended to Board of Directors for Final Approval. To Meet Requirements of Sales Departments

By C. O. Willson

EXCELSIOR SPRINGS, Mo., Apr. 8. The proposed specifications for winter and summer gasolines to serve the domestic trade as promulgated by a committee of the Western Petroleum Refiners Association were approved by the technical group and by a general session of the association which closed its twentieth annual meeting here today. The specifications which have been under consideration for some time by the committee were first made public at the opening technical session on Wednesday and after some discussion were approved. Today at the general meeting they were unanimously approved. Before becoming finally effective they must be considered and approved by the association's board of directors.

The proposed specifications for the winter and summer grades are shown in the accompanying table. Practically every specification was attacked when first presented before the technical group by H. W. Camp, general superintendent of refineries for the Empire Oil & Refining Co., and chairman of the committee. When it was explained that the specifications had been drawn up for the primary purpose of meeting a sales situation rather than to reflect scientific accuracy based on new developments in motor fuel specifications, a large part of the opposition was withdrawn.

The sponsors of the new specifications contend that the present specifications covering U. S. Motor gasoline are not sufficiently definite to cover the requirements of a large majority of Mid-Continent refiners, and abuses have developed which have worked a hardship on operators who are required by the buying trade to meet all the specifications covered in the proposed new specifications.

From the floor it was pointed out that for years the industry has been trying to get away from initial, gravity, endpoint and color in motor fuel specifications, and the latest U. S. Motor specifications do not include any requirements as to these points, which are a part of the proposed W.P.R.A. grades. This objection was answered with the statement that the jobbing trade still considered these specifications important, and most refiners are required to incorporate gravity, initial and endpoint in their quoted grades. The same situation applies to color, a great majority of the sellers still furnishing a white grade between 25 and 30 Saybolt. A motion to increase the minimum from 25 to 28 color was defeated. It was also suggested that the maximum sulphur requirement be .15 instead of .1. It was the consensus of opinion that the new specifications should follow those of the Government in this matter due to the fact that the buyers had been educated to believe that sulphur in excess of .1 was harmful to the engines.

There was also some discussion as to the gravity specification. Before being finally approved it is believed that the grades will carry a minimum specification rather than a spread, as now shown.

In the discussion cases were cited in which inferior gasoline, meeting the present U. S. Motor specifications, was being sold at cut prices. In some cases, by not treating to color or sulphur, the refiner is able to keep his gasoline within the 57-65 octane rating and secure a part of the premium to which that grade is entitled. There were other cases in which improper or lack of treating resulted in bad odor which would have necessitated additional refining costs to assure a sweet product.

The 10 per cent point was also discussed. One refiner advocated that the

(Continued on Page 68)

PROPOSED SPECIFICATIONS FOR WESTERN PETROLEUM REFINERS ASSOCIATION GASOLINE

	Winter	*Summer*
Gravity A. P. I.	60-62	58-60
I. B. P.	100°F. Max.	110°F. Max.
10% Evaporated	140°F. Max.	155°F. Max.
50% Evaporated	284°F. Max.	284°F. Max.
90% Evaporated	392°F. Max.	392°F. Max.
End Point	420°F. Max.	420°F. Max.
Recovery	95% Min.	95% Min.
	Without Residue	Without Residue
Doctor	Sweet	Sweet
Non-Corrosive	3 Hrs. at 122°F.	3 Hrs. at 122° F.
Color	Plus 25 Min.	Plus 25 Min.

Filtration through one thickness of filter paper shall be permitted.

Gum Content (Copper Dish) 30 mg/100 cc Max. 30 mg/100 cc Max.
Gum as determined by average of 3 determinations run simultaneously.

Vapor Pressure—Reid Method 12lb@100°F. Max. 10lb@100°F. Max.

Sulphur	0.1% Max.	0.1% Max.
Acidity	None	None

All methods of testing shall be in accordance with A.S.T.M. methods.

There shall be three grades of gasoline of the above specifications. These grades to be—Under 57 octane; 57 to 65 octane, and 65 octane and above.

Octane Number—To be determined in accordance with the standard method prescribed by the Standard Oil Development Company, using the 'CFR' engine or Ethyl Corporation Series "30" engine, and reference fuels A-2 and B-2.

It is distinctly understood that all specifications are for gasoline in bulk at point of delivery.

Better Times Ahead in the Oil Industry

With the Recent Increase in Crude Oil and Gasoline Prices It Is Anticipated That Renewed Buying Power Will Be Established

By L. G. E. Bignell
Petroleum Engineering Editor

With all buyers of crude oil following the lead of the Continental Oil Co. in raising prices 15 cents a barrel in all fields of major importance in the Mid-Continent and Gulf Coast areas, and smaller increases in other fields, there is a decidedly better tone in the petroleum industry. With the production of about 1,800,000 bbls. of oil per day this increase of 15 cents per barrel will mean added income to the producers in the Mid-Continent area of about $216,000 per day, after deductions for royalty, pipe line and gross production tax are made. Of this amount East Texas producers will receive nearly $40,000 based on runs of 325,000 bbls. daily, while Oklahoma oil men will get about $48,900 more on runs of 408,000 bbls.

During the low price period it has been absolutely necessary that every economy be practiced in operating properties and for that reason many repairs, replacements and renewals have been deferred. The lease man has had to get along with what he had and make the best of it.

With increased income, the producers, as well as the refiners, will take the opportunity to make necessary repairs and replacements which have long been delayed and this movement has actually been started as witnessed by increased inquiries for and sales of material used in the industry.

The actual buying at first will be confined largely to small miscellaneous parts that are needed to carry on operations. Under the conditions of low price and restricted production the shutting down of a well for a day or so did not mean a material loss in income, but with the increased price for crude oil, and an active demand, every hour's production will count and to keep wells running repairs and renewals must be made.

While it is impossible to secure accurate figures because of daily changes it is estimated that about 600 men have been put to work in the Greater Seminole area in Oklahoma making necessary repairs, pulling 6⅝-inch casing, re-running tubing, replacing rods and working barrel parts, cleaning up leases and repairing rig fronts and engines. One company has put over 150 men on this kind of work and estimates that it will take it the rest of this year to again place all of its properties in first class condition. This will involve the estimated expenditure of $1,500,000 in new equipment and parts.

There is an active demand for oil from Seminole. There are a large number of clean-out strings of tools running in this area and some new wells are being drilled. Offset requirements and need for additional oil will cause more drilling and it is anticipated that many new wells will be drilled during the summer.

With increased income the oil companies will have cash with which to do this work and they feel they can make no better investment at this time than in placing their old properties in the best possible condition for continuous operation and maximum production.

East Texas

The East Texas area has been the most active in the country during the past 14 months and drilling continues there with about 80 completions per week. With 3,000 to 4,000 more wells to drill it is quite evident that the drilling activities will continue throughout this year. These wells cost about $25,000 each to drill and complete and will create a steady market for new casing and tubing as practically all old pipe has been used.

Reports recently received from this field indicate that there is already more activity in buying miscellaneous supplies, chemicals for treating cut oil, and pumping equipment. With the increased income many of the operators will standardize their wells for pumping in advance of the falling off of natural flow conditions, because it has been found difficult to anticipate accurately when the underground pressure will fall below flowing stage in most parts of this field.

Water movement is slow and uncertain and while some areas on the extreme west edge and northwest portion of the field now show water it does not enter into many of the wells at this time. However, increases in bottom hole pressures recently recorded in wells in all parts of the field indicate that water movement is definite and is the major force that is building up pressures in wells there.

It is recorded that some wells that have been dead have started to again produce and other wells show increased activity, all indicating that forces tending to drive the oil to the wells is being built up from some outside sources. If there were a supply of free gas in this field this additional energy might be attributed to it, but lacking such a medium for increasing pressures it is only logical to assume that the water drive is the motivating force now becoming effective.

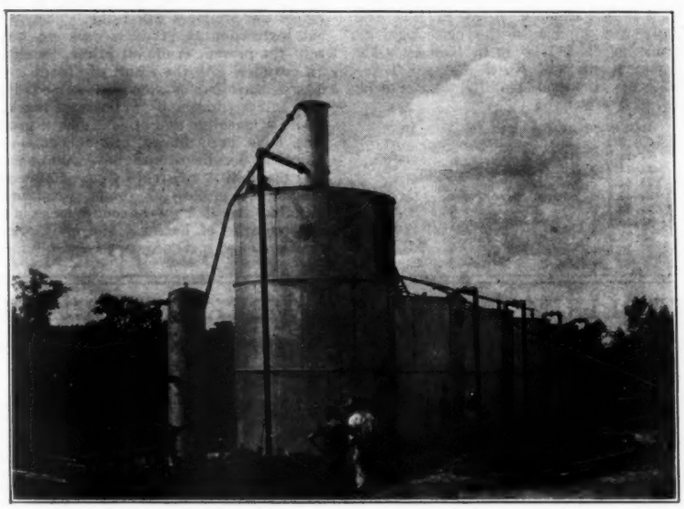
Large operators have been making installations of pumping equipment much of which has been moved in from other fields but it is anticipated that most of this old equipment will soon be in place and buying of new material will be necessary.

It is estimated that about 350 wells in the East Texas Field are now equipped with pumping equipment. Out of a total of about 4,800 wells this is a small percentage but it is admitted by all familiar with the area that in time all wells there will have to be pumped to secure the maximum amount of oil. The time that will elapse before pumping will be necessary is variously estimated and some predict that their wells will continue to flow for five years.

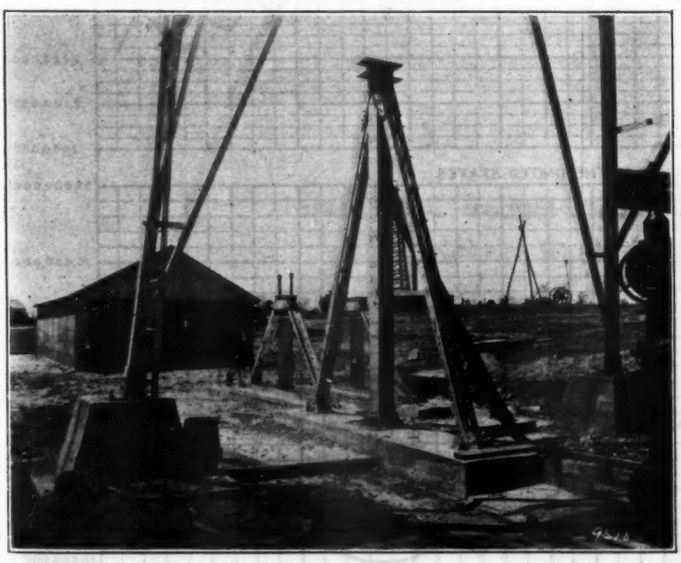
Avoid Shutdowns

Whatever may develop as to rate of lowering of bottom hole pressures to around 800 pounds, at which pressure wells will have to be pumped, it has

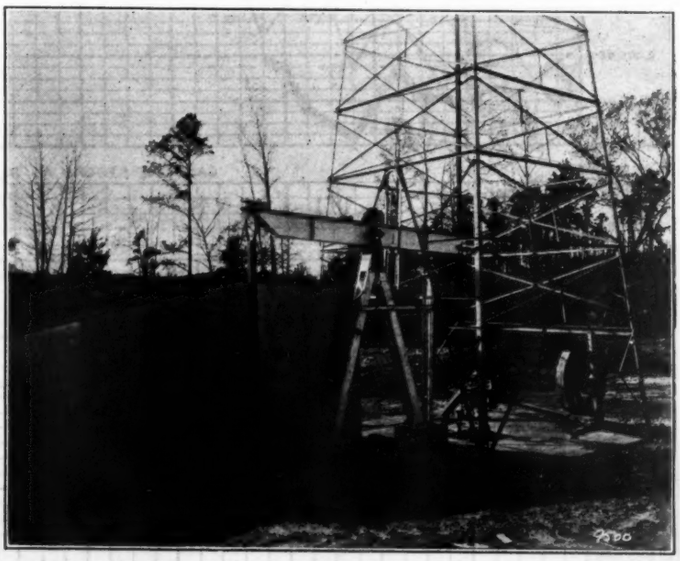
(Continued on Page 68)



Battery of steel tanks with water separator system on Humble Oil & Refining Co.'s I. E. Sexton lease, London district, East Texas.



Steel Rig Front, one of five outfits, being erected on wells in the Gladewater area in East Texas.



Complete steel pumping outfit recently erected on Margay Oil Corp.'s No. 1 Victor, about 2 miles north of Gladewater, East Texas Field.

Producers Now $237,000 Per Day Richer

All Companies Meet Crude Price Advances Instituted by Continental Oil Co. Two Major Companies Protest

By James McIntyre

Oil producers in Kansas, Oklahoma, Texas, Louisiana, Arkansas, southeastern New Mexico, Colorado, Wyoming, Montana, Lima, Corning and Wooster Fields in Ohio, Indiana, Illinois, and Kentucky are richer by about $237,000 per day than they were on March 31. The 15-cent increase in the price of crude oil instituted by the Continental Oil Co. in Kansas, Oklahoma and North Texas on April 1, was followed by a general increase, mostly 15 cents per barrel, in the areas above named. The Stanolind Crude Oil Purchasing Co., Gulf Pipe Line Co., Gulf Refining Co., Gypsy Oil Co., Carter Oil Co. and Humble Oil & Refining Co., Mid-Continent Petroleum Corp. and others made their prices effective on April 11 as did the Ohio Oil Co. in the Central West area and the Rocky Mountain fields, and the Midwest Refining Co. in the Rocky Mountain area.

Stanolind Makes Statement

The Standard Oil Co. of Indiana, represented by the Stanolind Crude Oil Purchasing Co. and the Midwest Refining Co., strongly objected to meeting the 15-cent increase and the Standard Oil Co. (New Jersey), represented by the Humble Oil & Refining Co., the Carter Oil Co. and the Standard Oil Co. of Louisiana, found the increase just as objectionable, their excuse being that refined oil prices did not warrant any increase in the price of crude oil, and that even the old price was too high when the refined market was conisdered.

On Saturday afternoon, April 9, R. S. Ellison, president, Stanolind Crude Oil Purchasing Co., announced that effective at 7 a.m., Monday, April 11, the company would advance the price paid for crude purchased by it in Kansas, Oklahoma, North and North Central Texas, 15 cents a barrel, making the following schedule effective:

Below 29 degrees gravity	$0.76
29-29.9	.78
30-30.9	.80
31-31.9	.82
32-32.9	.84
33-33.9	.86
34-34.9	.88
35-35.9	.90
36-36.9	.92
37-37.9	.94
38-38.9	.96
39-39.9	.98
40 and above	1.00

In connection with the announcement Mr. Ellison issued the following statement by the directors of the Standard Oil Co. of Indiana, explaining their reasons for delaying participation in the crude oil price advance:

"Crude oil is valueless except as value may be realized from products into which it may be separated. The price of crude oil must always be determined by the prices the products will bring. The present realization on products does not warrant the present crude oil prices, let alone an advance. As the result of dumping of distress gasoline, evasion of gasoline taxes, and other unsound practices, market prices of gasoline and other finished products have been forced below normal in countless localities and have eliminated the possibility of realization justifying the higher prices for crude. Notwithstanding the lack of a sound basis, the importunities of business and civic organizations and producers who, we know, have used every possible effort to stabilize production, have induced us to join in the advance. The hopes expressed by producers that this action will aid in stabilizing conditions may be realized although the results of similar temporary expedients in recent months do not encourage the belief unless such hopes are realized, it is obvious the new prices will not hold."

Humble Protests

The Humble Oil & Refining Co. on Monday, April 11 met all the crude price advances in all the areas in which it produces or purchases crude which includes North, Central, East Central, West and Southwest Texas, Lea County, New Mexico, Texas Panhandle, and the Gulf Coast Fields. In a letter to royalty owners and producers in the East Texas Field, the company gave notice that "for all oil run subsequent to 7 a.m. on April 11, 1932, and until further notice, or until such a time as we post a field price for East Texas crude oil, we will pay what we interpret to be the going price for East Texas crude oil sold

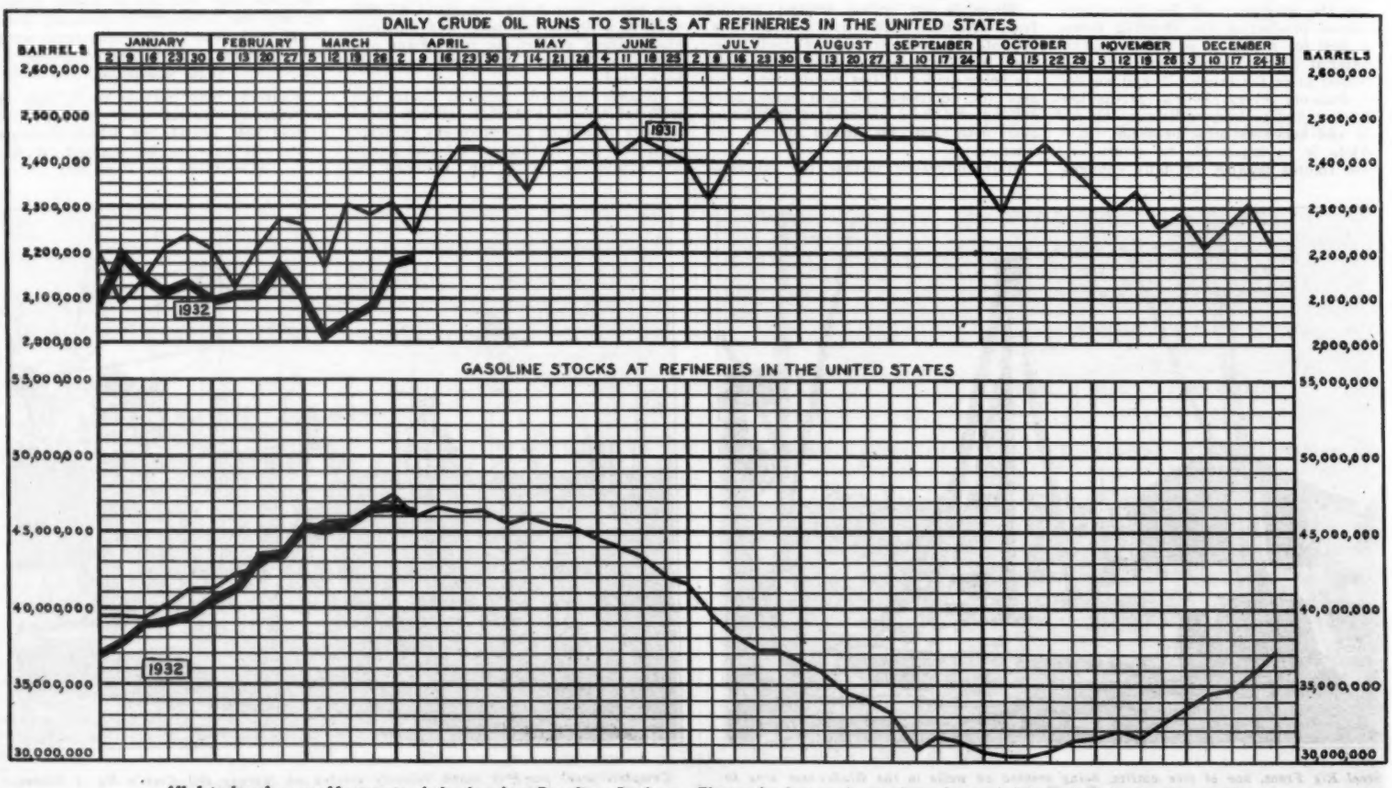
(Continued on Page 70)

AMERICAN PETROLEUM INSTITUTE WEEKLY REFINERY STATISTICS

The weekly report made to the American Petroleum Institute on refinery statistics—crude runs to still, gasoline stocks and gas and fuel oil stocks in barrels—for the week ending April 9:

	Week ending April 9, 1932				Week ending April 2, 1932				Week ending April 4, 1931			
	(1)	(2)	(3)	(4)	(1)	(2)	(3)	(4)	(1)	(2)	(3)	(4)
East Coast	100.0	447,700	7,295,000	5,454,000	100.0	438,900	7,015,000	5,848,000	100.0	470,700	8,931,000	7,692,000
Appalachian	91.8	84,100	1,861,000	1,082,000	91.8	89,700	1,858,000	1,114,000	93.8	97,600	1,842,000	1,162,000
Indiana, Illinois, Kentucky	93.9	321,600	6,658,000	4,127,000	93.9	316,700	6,510,000	4,040,000	97.5	276,900	5,878,000	3,108,000
Oklahoma, Kansas, Missouri	89.6	238,100	3,976,000	3,050,000	89.6	214,100	3,952,000	2,986,000	89.4	232,700	3,484,000	3,709,000
Texas	91.3	516,300	8,516,000	8,574,000	91.3	499,400	8,764,000	8,700,000	91.9	491,700	7,871,000	8,339,000
Louisiana and Arkansas	93.9	170,700	1,900,000	4,387,000	93.9	159,600	1,901,000	4,287,000	93.3	141,700	2,081,000	2,334,000
Rocky Mountain	89.4	31,200	1,986,000	631,000	89.4	30,300	2,027,000	637,000	93.1	45,200	1,900,000	830,000
California	96.7	483,300	14,929,000	96,206,000	96.7	449,300	14,491,000	96,498,000	98.8	476,300	14,089,000	99,259,000
Total United States	95.1	2,293,100	47,171,000	123,521,000	95.1	2,198,000	46,519,000	124,110,000	98.7	2,231,900	46,076,000	126,433,000
Texas Gulf Coast	99.8	401,600	7,016,000	5,920,000	99.8	402,600	7,195,000	6,088,000	100.0	377,100	6,759,000	6,051,000
Louisiana Gulf Coast	100.0	120,000	1,773,000	3,727,000	100.0	116,700	1,778,000	3,627,000	100.0	95,000	1,921,000	1,346,000

(1) Per cent refinery capacity represented. (2) Daily crude runs to stills. (3) Gasoline stocks. (4) gas and fuel oil stocks.



All data based on weekly reports of the American Petroleum Institute. Figures for last week not shown in graph but are included in above table.

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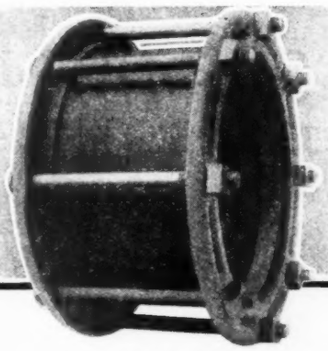

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Motor Fuel Needs Spur Research Work

One of the Outstanding Results of This Investigation Is a Higher Quality Gasoline With Respect to Antiknock Value

By W. A. Goldtrap
Arthur G. McKee & Co.*

Just as the increasing number of automobiles created the demand for enormously increased supplies of gasoline and furnished the stimulus for the development of the cracking process, in like manner at a more recent date, the increased quality of the gasoline necessary to meet the more rigid requirements of the improved engines, led to further research and development work to provide a supply of this motor fuel. One of the outstanding results of this research and development work has been to increase the quality of the motor fuel with respect to its antiknock value.

Automobile engineers, faced with keen competition, were and are constantly seeking greater efficiency and better performance in their engines. From research work carried on, it was definitely established that by increasing the compression ratio of the engine, greater power, faster pick-up, better fuel economy and an improved all-around performance would be obtained.

In the operation of high compression engines a fuel is required which possesses different characteristics from the motor fuels that have been previously used in the lower compression engines. A motor fuel that does not "knock" or "ping" gives the smoothest and most efficient operation and this fuel has come to be known as antiknock gasoline.

Petroleum technologists in their search for motor fuels to give the results desired, found that cracked gasoline when used separately in the internal combustion engine, gives superior and more satisfactory results than the average straightrun gasoline. This demand for better performance soon created a situation which called for a greater amount of unblended cracked gasoline, making it more and more difficult to dispose of straightrun or blended gasoline. This situation has become increasingly worse until today the stocks of straightrun gasoline are increasing rapidly and out of proportion to the cracked motor fuels.

The research and development work as previously referred to, developed that straightrun gasolines and heavy naphthas could be cracked and in this operation a good recovery of gasoline having high antiknock quality could be obtained.

In the development of the discussion on design and operation of reforming units, flow diagrams have been drawn up showing various types of units for cracking straightrun gasoline and naphtha. Flow Diagram No. 1 shows one type of unit recommended for this operation; Flow Diagram No. 2 is a unit similar to No. 1, but without a reaction chamber; and Flow Diagram No. 3 is of a unit in which the reaction chamber has been eliminated and in which the flash drum has been incorporated in the tower. A high temperature and pressure heat exchanger has been incorporated through which hot material from the heater passes and exchanges heat with the cold charge. The flow diagrams show the flow of material through the various units together with the main items of equipment.

In the unit shown in Flow Diagram No. 1, gasoline or naphtha is pumped by a high pressure pump through a vapor heat exchanger located in the vapor line between the flash drum and the bubble tower. Hot recycle stock is picked up from the bottom of the bubble tower with a second high pressure pump and discharged into the fresh feed charging line before entering the heat exchanger. From the heat exchanger, the combined charge passes to the heater where it is raised to the required cracking temperature. From the heater, the material enters the top of a vertical insulated reaction chamber held under full operating pressure. Here the material is allowed to remain for sufficient time to complete the cracking reaction.

From the reaction chamber, the material is discharged to the flash chamber through a pressure reducing valve. In the flash chamber, the fixed gas, gasoline vapor and recycle stock vapors pass up through refluxed bubble trays, where any entrained tar is separated, passes to the bottom section, and is continuously withdrawn as liquid through a cooler to storage. The scrubbed gas and vapors leave the top of the flash drum through a high pressure heat exchanger, countercurrent to the incoming charge stock, and go to the fractionating tower. The fixed gas and gasoline vapors pass up the column through rectifying trays, countercurrent to liquid reflux, which removes any high boiling recycle stock and leave the top of the column through a condenser and cooler to the distillate receiver. Here the fixed gas and distillate are separated, the gas going to the gas recovery system while the distillate goes to the stabilizer unit. Hot liquid recycle stock collects in the bottom of the fractionating column and from there is recharged through the system. This very briefly describes the flow of material through the system.

No Reaction Chamber

Flow Diagram No. 2 shows another cracking unit without the reaction chamber. Eliminating the reaction chamber, the flow of material and main items of equipment are the same as for the unit shown in Flow Diagram No. 1.

The unit shown in Flow Diagram No. 3 consists of a heater, high pressure heat exchanger and bubble tower, together with the necessary lines, pumps, instruments, etc. In this unit, the fresh charge is pumped from storage through a high pressure heat exchanger, countercurrent to the material from the heater. From the heat exchanger, the fresh charge goes to the heater. Hot recycle stock is pumped from the accumulator tank with a high pressure hot oil pump directly to the heater. The combined feed passes through the tubes in the heater where it is raised to the desired cracking temperature. From the heater, the material enters a high pressure heat exchanger where it is cooled under pressure by the incoming cold fresh charge. Leaving the heat exchanger, the material passes through a pressure reducing valve to a tower where it is separated into gasoline, recycle stock and cracked tar.

In considering or evaluating a reforming unit, there are many factors of both a general and specific nature to be considered. The specific factors peculiar to each individual case will not be discussed in this paper; but they should not be neglected when considering an installation. Some of the more important general factors to be considered are:

1. Flexibility.
2. Yields.
3. Quality of products produced.
4. Initial investment.
5. Operating costs.

A reforming unit is a cracking unit so designed that the optimum conditions of time and temperature for cracking gasoline or naphtha can be produced and any charging stock from straightrun gasoline or naphtha to heavy gas oil, can be cracked in the unit by maintaining the proper conditions for each stock. Cracking units of the latest design, constructed to crack kerosene or gas oil, are actually reforming straightrun gasoline and naphtha into high antiknock gasoline.

The choice of unit will depend upon local conditions, charging stock and flexibility desired. While Unit No. 1 costs more than either Units No. 2 or No. 3, it is suitable for a wide range of charging stock. The operating costs of all three types are about the same and will average about 25 cents per barrel of fresh feed.

As measured by previous standards, reforming of straightrun gasoline or naphtha is not a profitable operation. However, with the increased specification in quality of the gasoline, from an antiknock value now demanded, the refiner in many instances is or will be forced to crack straightrun gasoline and naphtha in order that the total yield of his

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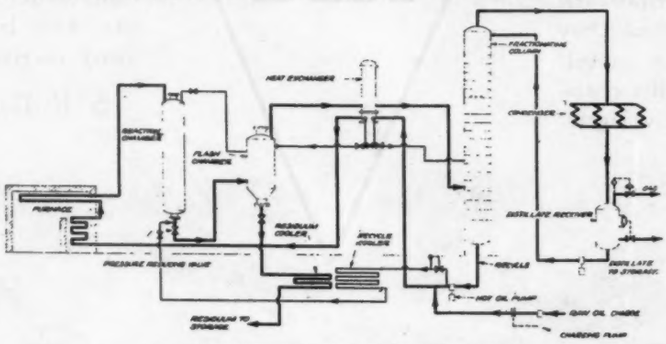
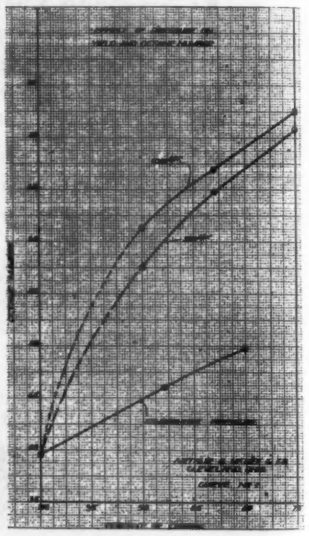


Figure 1—Reforming unit with reaction chamber.



Effect of pressure on yield and octane number.

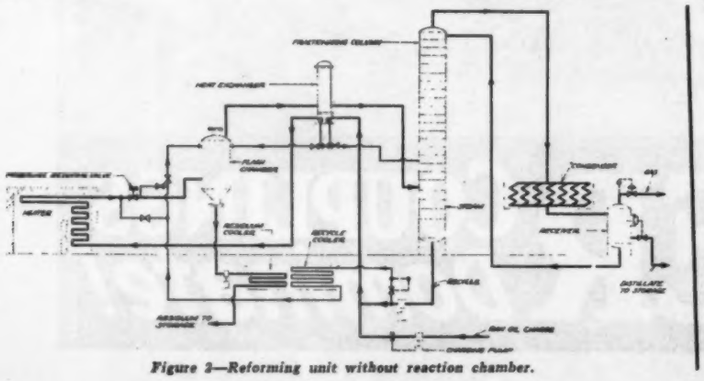


Figure 2—Reforming unit without reaction chamber.

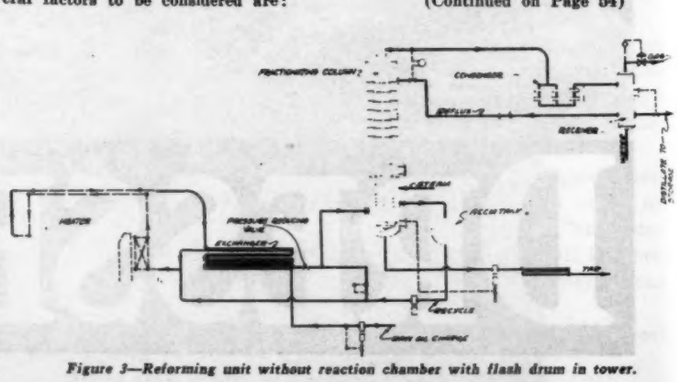
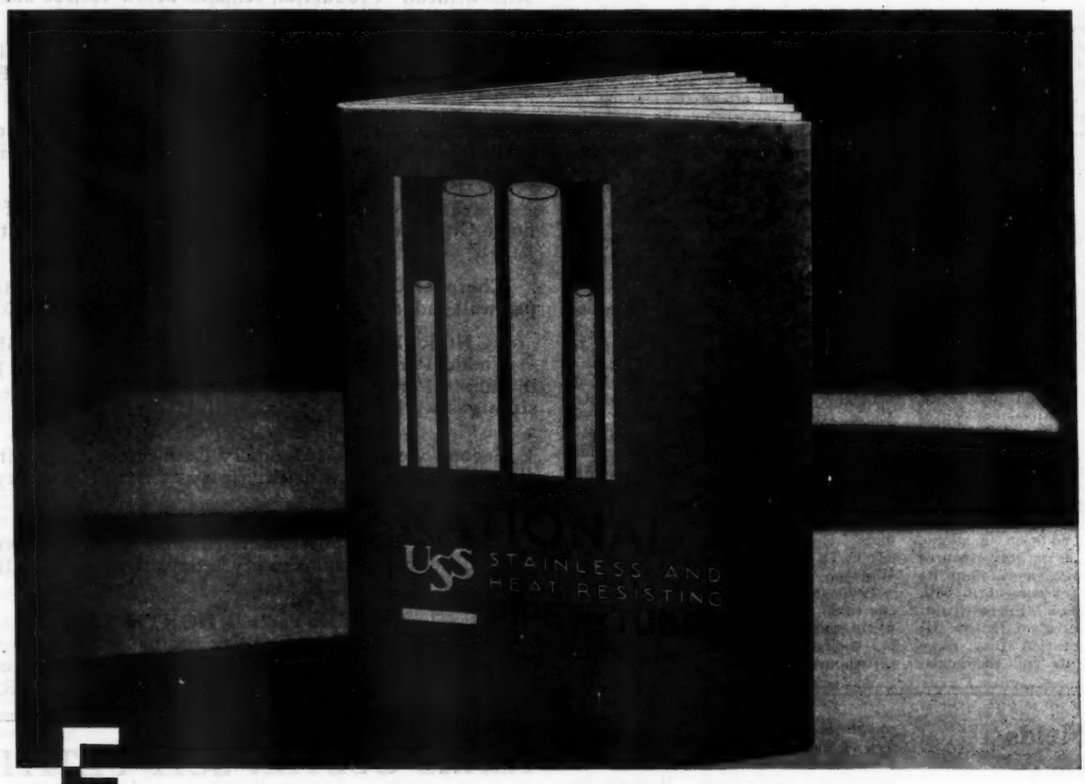


Figure 3—Reforming unit without reaction chamber with flash drum in tower.

*Before Western Petroleum Refiners Association meeting, at Excelsior Springs, Mo., April 6, 7 and 8.



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Tennessee Coal, Iron & R.R. Company
Universal Atlas Cement Company

INSTITUTE NAMES COMMITTEE TO APPEAR BEFORE SENATE

NEW YORK, Apr. 11.—A determined campaign against the proposed special excise taxes on lubricating oils and pipe lines on the part of petroleum interests is forecast by the action of the board of directors of the American Petroleum Institute which decided at its meeting here today to marshal the industry's forces in opposition to these special excise levies. The directors reiterated their declaration in favor of a balanced budget for the nation and emphasized the willingness of the oil industry to go along with industry generally under a general manufacturers' tax.

A committee consisting of C. B. Ames, vice president of The Texas Company; J. Howard Pew, president of Sun Oil Co., and W. R. Boyd, Jr., executive vice president of the institute, was authorized to present the industry's arguments before the Senate Finance Committee at a hearing scheduled for April 15 in opposition to the 4 cents per gallon tax on certain lubricating oils and the 8 per cent tax on oils transported through pipe lines. The board also asked the co-operation of oil men in voicing to Congress the industry's protest against any discriminatory taxes against any one particular industry.

It developed in the board's discussion that imposition of either one of the proposed special taxes would dislocate the industry generally in addition to adding a special burden on a natural resource that already is carrying more than its share of the cost of government in both the states and the nation. Suggestive of the discriminatory aspects of the special levies was the declaration that three states, Texas, California and Oklahoma, would have to pay 82 per cent of the proposed 8 per cent tax on pipe line runs.

W. R. Boyd, Jr., executive vice president of the institute, says:

"Everyone in the industry can help convince senators of the justice of our position and all oil men who can do so conveniently should be urged to come to Washington and attend the meeting."

Directors representing the marketing, refining and producing divisions of the institute presented statistics of the industry and in informal discussion recognized the need for continuing a policy of balanced output. Mr. Boyd reported to the directors that the campaign against gasoline tax evasion has assumed nationwide importance and that progress in curbing bootlegging is being made in nearly all of the states.

The meeting was attended by the following directors: Richard Airey, C. B. Ames, Amos L. Beaty, W. R. Boyd, Jr., E. J. Bullock, A. J. Byles, H. B. Earhart, W. S. Fitzpatrick, F. B. Fretter, H. R. Gallagher, John L. Gray, W. T. Holliday, W. M. Irish, D. J. Moran, J. Edgar Pew, J. Howard Pew, Frank Phillips, Herbert L. Pratt, E. G. Seubert, E. W. Sinclair, H. F. Sinclair, W. C. Teagle, J. C. Van Eck, and Lacey Walker. Others present were H. O. Caster, Cities Service Co.; L. L. Stephens, Standard Oil Co. of Indiana; E. L. Shea, Tide Water Associated; C. D. Watson, Pure Oil; and Harold Wilinson, Asiatic Petroleum.

Prior to adjournment the meeting discussed in some detail the proposal for a world conference on petroleum problems but took no definite action on the suggested meeting.

High Spots in Field News

KANSAS

Reno County producing area extended by important showing in semi-wildcat. Production remains below 100,000 bbls.

ROCKY MOUNTAIN AREA

Hobbs potential again reduced. Opening of public domain leads to rush of applicants. Production test in Frannie Field.

CALIFORNIA

California, producing too much oil, threatens curtailment program. Lessors partly to blame. Unitization being discussed.

OKLAHOMA

Increase in Oklahoma output caused by testing of wells in Oklahome City Field. Interesting showing in Kay County wildcat.

EAST TEXAS

Cherokee County added to list of producing counties. Allowable per well reduced from 71 bbls. to 67 bbls. Now 4,850 completions.

NORTH LOUISIANA, ARKANSAS, MISSISSIPPI

Caddo Parish gas field extended. Possible new producing area in Sabine Parish. Zwolle Chalk Rock oil producer. More Mississippi gas wells.

GULF COAST

Second well in Montgomery County comes in with wet gas like discovery well. New drilling play at East Hackberry. More activity in coastal fields.

SOUTHWEST TEXAS

Two new pools possible, north and south of Government Wells Pool, northern Duval County. Southern Jim Wells County test cores new sand at 5,276 feet.

WEST AND NORTH TEXAS

Renewed activity in Permian basin. Interesting tests in northern Winkler and Ector County. Gaines County to get test also. Fifteen locations in Wichita Falls area and four in Ranger district.

Late Fields

OKLAHOMA

The wildcat test in Lincoln County of Hilton Phillips and others' No. 1 in the SW cor. NW, Section 2-14-3, is nearing the pay horizon. The top of the Viola lime was found at 4,989 feet and the 6-inch casing was landed at 5,001 feet with a total depth of 5,002 feet.

Barnsdall Oil Co.'s No. 1 Gray, in Section 25-6-4, a wildcat in Pottawatomie County, has drilled the cement plug and is connecting up. The total depth of the test is 3,243 feet.

The first appearance of water in the Fish Pool, in eastern Seminole County, was found in the Tulsa Oil Co.'s No. 1 Davis, in Section 30-7-8. The well is a recent completion and was showing water from the Wapanucka pay horizon.

The Texas Company's No. 2 Eliza, SE cor. NW SE, Section 19-7-8, in the Fish Pool, was drilled deeper into the Wapanucka lime to a total depth of 3,105 feet, where it made 87 bbls. an hour for two hours. The top of the pay was found at 3,078 feet.

Empire Oil & Refining Co.'s No. 2 B. Fish, NE cor. SW SE, Section 19-7-8, flowed 884 bbls. of oil in 14 hours from the Wapanucka at 3,077-3,102 feet.

KANSAS

The Olson Drilling Co. and Shell Petroleum Corp.'s No. 1 Goering, C NE SW, Section 26-23-4w, Reno County, is believed to be one of the largest gas wells ever completed in Kansas. It gauged 78,250,000 feet of gas a day when drilled deeper into the chat pay at 3,332 feet. The top of the chat was found at 3,224 feet.

SOUTHWEST TEXAS

SAN ANTONIO, Tex., Apr. 12.—Smith & Capp's No. 1 Duval Ranch Co., south of the Government Wells Pool in northern Duval County, is expected to swab Wednesday or Thursday and looks very favorable for opening a new pool. Seacord & Putnam's No. 1 Johnson, north of the Government Wells Pool, has been completed at 1,574 feet for 10,000,000 feet of gas saturated with oil, opening a new pool and is a shallower sand than Government Wells Field. Magnolia Petroleum Co.'s No. 1 Seeligson in southern Jim Wells County is in a new sand cored at 5,276-81 feet and will take another core and then set pipe.

TIOGA FIELD

WELLSBORO, Pa., Apr. 9.—The Allegany Gas Co.'s No. 1 Charles Thomas, in Farmington Township, Tioga County, is a 20,000,000-foot gasser in the Oriskany sand at 4,110-14 feet. Engine trouble prevented the completion of the well.

CORONADO DECISION

WASHINGTON, D. C., Apr. 12.—Income from oil and gas produced on Oklahoma public school lands which have been leased was declared exempt from federal taxation by the Supreme Court of the United States in the case against the Coronado Oil & Gas Co. The court declared such a tax would constitute an illegal levy on a state agency. Solicitor General Thacher in asking the Supreme Court how far the Government could go in taxing the agencies and instrumentalities of states said he was advised that in Texas, Oklahoma and New Mexico alone taxes aggregating $12,000,000 were involved.

IRAQ PIPE LINE CONTRACT

Stewarts & Lloyds, Ltd., iron and steel tube manufacturers of London, announce that they have secured a large percentage of the contract for construction of 1,200 miles of pipe line for Iraq Petroleum Co. Value of the contract exceeds £500,000 (about $20,000,000) and involves manufacture of 60,000 tons of British steel.

DEEP ROCK MOVES OFFICES

Deep Rock Oil Corp. has moved its general sales and traffic offices in Chicago from 300 West Adams Street to the tenth floor of the Ashland Block at 155 North Clark Street.

TEXAS OUSTER SUIT PETITION HELD INSUFFICIENT BY COURT

AUSTIN, Tex., Apr. 9.—The exceptions upheld by Judge J. D. Moore in the antitrust suit against 15 oil companies show that the State's petition must be rewritten in all except a few paragraphs. The court held the general charges of law violations contained in Attorney General James V. Allred's original petition were wholly insufficient and required a complete repleading, in which charges made would specify what agreements are alleged to have been entered into by the defendants, when and where they were made and the parties and circumstances involved.

Paragraphs 2, 4, 6 and 8 of the original petition were struck down by exceptions which declared the greater part of the matter contained in them immaterial and irrelevant. These are the parts in which the attorney general alleged that the Standard Oil Co. of New Jersey, having been convicted in 1913 of violating the antitrust law, resorted to the scheme of "organizing a subsidiary corporation and taking over the affairs of a domestic corporation" and that the Socony-Vacuum Corp., the Standard of California and the Shell Union also had attempted to evade liability under Texas laws by operating through subsidiaries.

Exceptions were sustained which not only struck out the allegations as to "schemes and devices," but also those relating to the methods of organization of the companies and the handling of their subsidiaries. Other exceptions recited that ownership of stock in domestic corporations or in foreign corporations doing business in Texas under permits did not constitute doing business in the State on the part of the companies owning such stock, and these exceptions also were sustained. Apparently, all that was left of the four paragraphs was a few sentences naming the three Standards and the Shell Union and stating the location of their principal offices.

Among the exceptions which the court sustained were some declaring that certain allegations were "made for political purposes," and were prejudicial as well as immaterial.

Must Be Specific

The original petition alleged that the defendants and other corporations, during 1928 entered into a combination with the idea of forming a trust in the oil business, on or about June 1. Upholding exceptions, the court required the plaintiff to state specifically with whom the defendants entered into the idea of forming a trust; when and where the alleged agreements were made; in what form they were made and who represented the various defendants in making such agreements. He also upheld the objection that the petition's description of the purposes of the alleged combinations was merely the conclusion of the pleader, setting forth the substance of a statutory article, rather than allegations of anything done or attempted by the defendants.

Exceptions of the same kind to every allegation of conspiracy or other wrongful act made in the petition were upheld. In each instance the State was called on to say clearly what it was charging and to give particulars as to time, place and parties and circumstances.

The original petition charged that, in furtherance of alleged agreements, "the defendants herein, acting by and through their duly authorized officers and agents, together with other individuals and corporations (whose names to the plaintiff are unknown), and together with the officers and duly authorized agents of the other foreign corporations hereinabove named (and who are not parties herein) held various meetings and conferences, formal and informal, during the year 1928 in the city of New York and elsewhere." The objection sustained to this language calls on the State to show who were the agents representing the defendants at the various meetings and con-

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Cherokee County Test Is a Producer

Extends Production 4,000 Feet to South and 6,000 Feet to Southwest. Allowable Reduced to 67 Bbls. Locations Increasing

By L. E. Bredberg

DALLAS, Tex., April 11.—Cherokee County was added to the list of producing counties in East Texas on April 10, taking its place with Upshur, Gregg, Rusk and Smith Counties, when Merry Brothers and Perini's No. 1 Kelley in the M. De Los Santos Coy Survey, came in flowing 32 bbls. of oil in 10 minutes through one inch choke on tubing. The Woodbine sand was topped at 3,677-79 feet, the latter being the total depth of the well or minus 3,308 feet.

This well extends production approximately 4,000 feet farther to the south, and 6,000 feet southwest of the nearest producer. It is 2 miles north of the Clopton test which was abandoned last week, opening several hundred more acres to producing possibilities, and proving more producing acreage for the field, which now contains over 120,000 proven acres.

Allowable Reduced

The Railroad Commission has ordered another curtailment in per well allowable from 71 bbls. to 67 bbls. effective April 15. This periodical curtailment per well allowable is done in order to maintain the daily allowable of the field at 325,000 bbls. or less, but production now is running above this amount. However, distribution remains above production.

North Gregg County remains the most active area in East Texas, south Gregg and south Rusk also holding up in large number of activities each week. There were 59 locations staked in north Gregg this week, with 20 in the southern part of the county, and 26 in south Rusk. The total number of locations in the field for the week was 134, six less than last week. Locations in the field have been on the increase.

Now 4,850 Completions

There are now over 4,850 completed wells in the district, distribution continuing to be in advance of production each day. For the 24-hour period ending at 7 a.m., April 9, production totaled 331,096 bbls. Distribution totaled 394,606 bbls., or nearly 63,000 bbls. more than production for the same period. On the previous day distribution amounted to almost 21,000 bbls. more than production, companies continuing to draw on storage in the district.

For the week ending April 6, a daily average of 17,352 bbls. was withdrawn from storage in the district. The previous week showed an average of 27,036 bbls. withdrawn from storage. There is now over 7,700,000 bbls. of empty storage in the district, while only a little over 2,000,000 bbls. is in storage.

On April 1 the nine major producers in the field had completed the following respective number of wells: Humble Oil & Refining Co., 515 wells; Gulf Production Co., 295; Magnolia Petroleum Co., 280; Sinclair-Prairie Oil Co., 185; Shell Petroleum Corp., 170; Sun Oil Co., 135; Tidal Oil Co., 130; Stanolind Oil & Gas Co., 126; Arkansas Fuel Oil Co., 103.

Production Since Discovery

Total production for the field, since discovery, is approximately 140,000,000 bbls., allowing at least 2,000,000 bbls. for unreported or by-passed oil.

The total number of wells connected by 13 large purchasers in the field is over 4,125, the remainder being connected to by all other pipe line companies and purchasers.

The Southern Oil Refining Co. has contracted with the Republic Production Co. to take the latter's runs for one month, at 2½ cents per barrel above the posted price. The oil will be transported through the Texas Pipe Line Co.'s lines.

The Atlantic Pipe Line Co. is said to be soliciting connections near its gathering system and main line.

The Toronto Pipe Line Co. plans on starting shipping 500,000 bbls. per month by water to Toronto, Canada.

Rains County Wildcat

Greer, McLaughlin and others' No. 1 Roy Harper, in the David Rose Survey, Rains County wildcat, is standing shut down at 4,306 feet in Eagleford shale, looking like another interesting wildcat failure for the East Texas district. Eagleford was topped at 3,810 feet.

Pat Hudson's test, north and east of Cranfill-Reynolds outpost producer in Upshur County, is down around 3,400 feet. This test is on the D. F. Smith farm in the Johnson Denson Survey.

McFarland's No. 1 Willie Starr in the C. H. Hooper Survey, east of the Cranfill-Reynolds producer, Upshur County, has resumed drilling. It has been shut down for nearly three weeks. Elevation of this test is 274, and many consider it as having good chances of making another producer in this extreme end of the Lathrop producing area.

Another location has been staked in the vicinity of Eslick's No. 1 Whitehurst extension producer in Upshur County. This is Flanigan Production Co.'s No. 1 Whitehurst, 330 feet from the north and east lines of the north 30 acres of the west 40 acres of a 100-acre tract in the McKinney and Williams Survey. This will be an interesting test for this extension area.

Trade in Lathrop

Another big trade was made in the field during the past week, involving 800 acres in the north end of the Lathrop area, across the Gregg County line in the Marshall Mann Survey, Upshur County. The Simms Oil Co. was the purchaser, obtaining a three-quarters, and thereby acquiring controlling interest in the W. R. Nicholson tract. This gives the company a block of nearly 1,800 acres in this immediate area, having a quarter interest in 200 acres to the south, and a half interest in two other tracts, one which contains 210 acres, and the other 375 acres, all lying in the same survey, partly in Gregg and partly in Upshur County. The first mentioned 400 acres is being drilled under a unitized agreement between the Stanolind Oil & Gas Co., Simms Oil Co. and Continental Oil Co. The Stanolind is operating the block for the three companies.

Consideration for the 800 acres in the Nicholson tract was said to be in the neighborhood of $35,000 cash and an assumed oil payment of $1,000,000. This latter will be paid out of three-sixteenths of the Simms Oil Co.'s production. Frank Buttram, of Oklahoma City, owns the remaining one-quarter interest in the lease. Twenty wells are to be drilled on the lease before the end of the year.

Major companies continue to farm out west edge leases, the majority of them lying in Gregg and Upshur Counties, and these leases are now the scenes of activities, the new owners commencing drilling almost immediately upon acquisition. The Humble Oil & Refining Co. has farmed out about 600 acres in the W. King Survey, W. H. Jones, and J. T. Jones Surveys in Upshur, and the S. Harrell, D. Ferguson and I. Baty Surveys in Gregg County. Payment is to be made out of the oil, as in all such cases where leases are farmed out to smaller operators.

On account of increased activities in the field larger demand is being made on the supply companies for more equipment. As practically all second hand equipment has been used up in the field, with but little being trucked in from other fields from time to time, the equipment now sold is mostly new. There is an especially increased demand for pipe and steel derricks, the latter displacing the wooden derricks which were formerly in demand in the field on account of their low price. Pipe companies are now enjoying a big increase in demand for new pipe and tubing.

One company is now paying as low as $1.60 per foot for drilling, other companies paying $1.65 and $1.67. The majority of the contracts are being let for $6,000 per well, showing that competition in drilling is still keen amongst the contractors.

April 7 Federal Judge Bryant of Tyler issued an order giving free rein to four operators who formerly obtained injunctions against the Railroad Commission preventing that body from interfering with the producing of their leases as they saw fit. The commission was then granted an injunction against these operators, and it is this injunction which has been nullified by the federal judge, although the operators will be subject to the penalties incorporated in the commission's order of February 26 if they go ahead and produce more than the stated per well allowable for the field. So far the operators have not opened their wells.

Another dry hole was drilled on the east edge of the Kilgore area in Gregg County this week. This test was Westheimer and Daube's No. 1 J. T. Florence in the Mary Van Winkler Survey, approximately 1,000 feet east of production. Total depth is 3,670 feet.

Lucas and Hobbs' No. 1 Sartin in the James Jordan Survey, on the western side of the Joiner area, Smith County, is shut down waiting on orders after swabbing 60 per cent salt water. Total depth is 3,807 feet. It is south of the Sinclair Oil & Gas Co.'s No. 1 Wiley, which was formerly temporarily abandoned, then plugged back for a small producer, making some water.

Harrison County

J. G. Peterbaugh and others have staked location for a wildcat on the E. M. Collum farm in the W. G. Pentecost Survey, Harrison County. Anderson and others formerly took a 3,000-acre block in this area, and turned 1,100 acres for the test which is to be drilled shortly.

Grady and Vaughn have taken over Ross and Seward's No. 1 Burton test which is now shut down at 3,118 feet, and will clean out and deepen. This test is a few miles northeast of Henderson in Rusk County, and is interesting because of the geological importance.

Van Zandt County

The Pure Oil Co. is preparing to abandon its No. 4 J. J. Murphree, on an 80-acre lease in the John Walling Survey, in the Van Field. It is now shut down at 3,004 feet. It is surrounded by producers.

The present plan of proration of the Van Field was attacked in a hearing before the Railroad Commission at Austin on April 5, and increase in production was asked for the field, but was not granted. The daily allowable will remain at 50,000 bbls.

Corsicana District

The Tidal Oil Co. has sold all of its producing holdings in the Powell Field, Navarro County. The acreage and wells involved are as follows: 25 acres with four producing wells, the lease has two abandoned wells; 20 acres, 1 gas well, 4 abandoned wells; 50 acres, 4 wells, 1 abandoned well; 29 acres, 4 wells, 11 abandoned wells; 21 acres, 6 wells, 3 abandoned wells; 11 acres, 3 wells, 4 abandoned wells; 20 acres, 6 wells, 2 abandoned wells. Some of these leases were sold about a year ago, while others were sold only recently. William Gorrell of Ranger, Tex., was the purchaser.

EAST AND EAST CENTRAL TEXAS WILDCATS

Week Ending April 11

ANDERSON COUNTY

Company, well, farm name, section and block—	Remarks:
C. R. Wilmuth et al's No. 1 N. B. Watson, 500 ft. from W line and 4,850 ft. from N of S line of survey in S½ of 129-ac. tract, M. Main Sur.	T. D. 1,538 ft.

ANGELINA COUNTY

Heiburt et al's No. 1 Long Bell Lumber Co., 160 ft. from S line and 200 ft. from E line of Sec. 9, H.&T.B. Sur.	Location.

BOWIE COUNTY

Burnham-Robertson and Greer's No. 1 F. O. Weiss, 850 ft. from N line and 200 ft. from W line of B. H. Williams 50-ac. tract, Jessie Dean Sur.	T.D. 1,120 ft.

CHEROKEE COUNTY

Bridges and Candler's No. 1 Berryman, center of Berryman tract, H. Kimble Sur.	S.D. 1,000 ft.
Harper and Perkinson's No. 1 J. T. Lowery, 650 ft. from N line, 150 ft. from W line of Blk. No. 5 on a 139.6-ac. tract, 4 miles W of Troupe, C. B. Jennings Sur.	Drlg. 3,366 ft.
Merry Bros. and Perini's No. 1 Annie Kelley, 330 ft. from N line and 443 ft. from E line of 292-ac. tract and 96-ac. lease, M. De Los Santos Coy Sur.	T.D. 3,679 ft.; drlg. plug.
Mid-Kansas Oil & Gas Co.'s No. 1 H. D. Kelley, 330 ft. from S line and 537 ft. from E line of lease, M. De Los Santos Sur.	Derrick.
Mid-Kansas Oil & Gas Co.'s No. 9 M. M. Cross, 1,540 ft. from N line of Cherokee County and 537 ft. from W line of lease, Fowlks Sur.	Derrick.
Mustang Oil Co.'s No. 1 Decker and Whiteman, east side of W 75 acres of S 150 acres of survey, 3 miles S of Maydelle, F. W. Fulgham Sur.	Derrick.
Patton-Liver and Murray's No. 1 Eddie Toole, center of one-half-acre tract, 6 miles E of Troupe, De Los Santos Sur.	Rig up.
Dr. Tubbs et al's No. 1 J. H. Sharp, 330 ft. from N line and 71 ft. from E and W lines of 3½-ac. tract, M. De Los Santos Coy Sur.	Derrick.

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COMPLETIONS IN EAST TEXAS

Week Ending April 9

Dallas County

Joe Wilson's No. 1 fee, abandoned, total depth 1,150 feet.

Ellis County

Worthem Petroleum Co.'s No. 1 Cerf, dry and abandoned, total depth 2,264 feet.

North Gregg County

P. J. Alco's No. 1 F. Thomas, top sand 3,499 feet, initial production 90 bbls. in 15 minutes through open tubing, total depth 3,539 feet. Amerada Petroleum Corp.'s No. 5 Bumpass, top sand 3,562

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Planning New Tests in Permian Basin

One in Northern Winkler and Another in Ector County Attracting Notice. Prospective Play in Gaines County. New Locations in Wichita

By L. E. Bredberg
Fort Worth Bureau, The Oil and Gas Journal

FORT WORTH, Tex., Apr. 11.—The Permian Basin is arousing from its dormant state which has held activities, especially wildcatting, to a minimum during the past year, and several new tests in various sections are attracting those who continue to remain in the district and have hopes of it staging a "comeback."

Harry Adams and others have staked a semiwildcat location, 660 feet from the north and east lines of Section 1, Block 77, Public School Lands, on the Scarborough ranch in northern Winkler County, and contracted to spud another wildcat by June 20 in Ector County. The Winkler County test will be approximately one-half mile west of the nearest producer in the Llano-Scarborough Pool, which is about 7 miles north of the Hendricks Pool, the first field found in the county.

The Ector County test will be located on the F. V. Addis estate, 5 miles southwest of Odessa. Location will be in Section 35, Block 43, Township 2s, T.&P. Survey, approximately 2 miles east of Weekly Oil Corp. and others' No. 1 Cowden, which was completed this week for a gas well, estimated good for 4,000,000 feet of gas per day from 4,305 feet.

Gaines County Test

The Humble Oil & Refining Co., J. L. Green, Midland Oil Co., Barnsdall Oil Co., Landreth Production Co. and Honolulu Oil Co. have all been purchasing acreage in Gaines County. Fred Turner, McElreath and Suggett, Sire and Davidson plan to drill a 5,000-foot test in Section 397, Block G. Turner holds a three-eighths interest, McElreath and Suggett three-eighths and Sire and Davidson one-quarter in the block. The Republic Production Co., Humble Oil & Refining Co. and Texas Pacific Coal & Oil Co. have contributed acreage for the test.

This area has been looked upon favorably by many operators and companies, and the test will be one of the most interesting in the district. It is approximately 9 miles northeast of a 4,835-foot dry hole formerly drilled in Section 23, Block A-25, by the Humble Oil & Refining Co.

Glasscock County

Northrup and Carr of San Angelo propose drilling a test northeast of the Penn Oil Co.'s test in Glasscock County. This new test will be in Section 11, Block 35, Township 3s, T.&P. Survey. The Landreth Production Co., Tidal Oil Co. and Continental Oil Co. have donated acreage for the test.

Noel Lawson and others will spud a test in Glasscock County by July 1. This test will be in Section 20, Block 33, 3s, T.&P. Survey. It is approximately 1¼ miles west of the nearest production in the Phillips area, and if it makes a producer will extend production that distance. Pick and Service are now spudding a test one-half mile west of production in Glasscock, in the SE of Section 21, Block 33, Township 2s.

Howard County

The small producing Denman area of eastern Howard County is to get two more tests at once. Harrison is to drill his No. 2 test in Section 10, Block 30, Township 1s, and Myers and others will drill a No. 1 test in Section 14 of the same block and survey.

New Deep Test at Big Lake

The Big Lake Oil Co. has staked location for its seventh deep test in the Big Lake Field, Reagan County. This test will be known as its No. 7-C University, and will be 1,570 feet from the west and 725 feet from the south lines of Section 25, Block 9. The company has five deep producers in the field and Group No. 1 Oil Corp. and Continental Oil Co. have four deep producers. Production from both the shallow and deep pay horizon wells is now 25,000 bbls. per day.

Schleicher County

Eastland Oil Co.'s No. 1 Tisdale in Section 29, Block M, G.H.&S.A. Survey, Schleicher County, attracted some attention this week when it topped what several geologists believe is the Bend lime at 5,325 feet, or 3,007 feet below sea level, stated as being higher than found in any other deep test in the county. It is fishing for tools, as is Wesner's No. 1 Nicks, the other deep active test.

Andrews County

Top of the lime section in Fuhrman Petroleum Co.'s No. 1 W. S. Boner, Section 24, Block A-43, Andrews County, is expected to be logged within a few hours drilling, as the test is now down 3,775 feet in anhydrite.

Storage Report

The West Texas steel storage report as compiled by the scouts for February shows 24,180,860 bbls. in stock, 27,465,056 bbls. in room and 51,645,916 bbls. capacity, a decrease of 563,561 bbls. in stock over the previous month.

Ector Runs Reduced

Effective April 5, the Humble Oil & Refining Co. reduced its runs from Ector County from 4,090 bbls. per day to 3,086 bbls. Small reductions were also made by other companies in the Penn Pool, effective the same date. The sum of these reductions brings the total daily nominations down to 4,752 bbls. from around 6,300 bbls.

Fisher County

Southern Oil Corp. of America's No. 1 Flannigan, approximately one-half miles northwest of the nearest production in Fisher County, topped the pay at 3,087 feet this week and the hole filled 225 feet with oil in 45 minutes. Elevation of the test is 1,797 feet and total depth is 3,088 feet. This apparently means another extension for Fisher County production. It is located in Section 20, B.B.B.&C. Survey.

Howard County

The Tidal Oil Co. has sold its G. O. Chalk 160-acre lease in Howard County to C. L. Wann of Coleman, Tex. There are two producing wells on this lease. Mr. Wann also purchased the same company's 80-acre lease in Mitchell County, including one producer.

WICHITA FALLS AND RANGER

Perkins and Cullum's No. 1 Abercrombie in the John Harris Subdivision, Block 157, wildcat discovery well southwest of Archer City in Archer County, is now looking good for only 35 bbls. per day from pay logged at 1,190-95 feet.

Deep Oil Development Co. and others' No. 2 Wilson, Lease No. 1, in the Chalk Hill area, has been completed for an initial production of 800 bbls. from sand logged at 2,207-11 and 2,212-17 feet. The same company's No. 3, in the same area, Archer County, was completed for an initial production of 740 bbls. These are the best two Canyon Series wells yet completed in the area. The latter well logged pay at 2,201-08 and 2,209-13 feet.

Grayson County

Verne Dumas is planning to drill a deep test on the M. E. Williams farm in the Solomon Nix Survey, Abstract 908, in the southern part of Grayson County, approximately 6 miles northeast of Van Alystine. A 125-foot steel derrick will be used in drilling the test, which may go to 7,000 feet. It will be located on a 28,000-acre block, 13,000 of which is in Grayson County and 15,000 acres in Collins County.

There was one completion in Stephens County, two in Callahan and three in Shackelford County this week. These counties are all in the Ranger district. There were 15 locations staked in the Wichita Falls district and four in the Ranger district.

COMPLETIONS IN WEST TEXAS

Crane County

Gulf Production Co.'s No. 96 McElroy, top pay 2,876 feet, total depth 3,040 feet, plugged back to 2,944 feet, shot 220 quarts 2,878-2,936 feet, initial production 237 bbls.

Ector County

Weekly Oil Corp. and others' No. 1 Cowden, total depth 4,375 feet, plugged back to 4,305 feet, completed for gas well, initial production estimated 4,000,000 feet.

Ward County

Hankinson and others' No. 1 Emery, dry and abandoned, total depth 2,238 feet.

WILDCAT OPERATIONS IN WEST TEXAS

Week Ending April 11

ANDREWS COUNTY

Company, well, farm name, section and block— Remarks—

Fuhrman Pet. Co.'s No. 1 Boner, 1,320 ft. from N and 440 ft. from W, Sec. 24, Blk. A-43, P.S.L. ..... Drlg. 3,090 ft.; show gas 3,005 ft.

BREWSTER COUNTY

Brewster Oil Co.'s No. 1 fee, 2,640 ft. S and 2,598 ft. E of NW cor., Sec. 45, Blk. G-15, G.C.&S.F. Sur. ..... S.D. 1,935 ft.

E. L. Chapman's No. 1 Skinner, C SW SE Sec. 100, Blk. 2, G.C.&S.F. Sur. ..... S.D. 1,302 ft.

Trans-Pecos Oil & Gas Co.'s No. 1 Jones, 330 ft. from N and 2,500 ft. from E of Sec. 18, Blk. G-15, G.C.& S.F. Sur. ..... S.D. 2,900 ft.

Van McPhail's No. 1 McIntyre, SE cor. Sec. 59, Blk. 352, 7 miles south Alpine ..... S.D. 1,750 ft.

COCHRAN COUNTY

Penn Oil Co.'s No. 1 Slaughter, C Labour No. 80 of League 129, Carson County School Lands ..... T.D. 5,052 ft.

CONCHO COUNTY

Beesley et al's No. 1 Waring Estate, 400 ft. from N and E, Sec. 163, T.&N.O. Sur. ..... T.D. 1,206 ft.; underreaming 10-in. csg.

CROCKETT COUNTY

Coleman & Moore's No. 1 Ferner, 2,135 ft. from N and 1,485 ft. from E of Sec. 36, Blk. 2, I.&G.N. Sur. ..... Spudded and S.D.

COKE COUNTY

Mid-Kansas Oil & Gas Co.'s No. 1 Hearn, 980 ft. from S and W, Sec. 371, Blk. 1-A, H.&T.C. Sur. ..... Spudded.

DAWSON COUNTY

Albaugh et al's No. 1 Robinson, C NW Sec. 46, Blk. M, E.L.&R.R. Sur. ..... To resume drilling.

ECTOR COUNTY

Thomas et al's No. 1 Edwards, 330 ft. from S, 2,310 ft. from E, Sec. 38, Blk. 43, Twp. 3s, T.&P. Sur. ..... Bldg. rig.

H. F. Wurts' No. 1 E. A. Ibbetson et al, 330 ft. from N and E lines of NW Sec. 16, Blk. 46, Twp. 3s, G. M. M.Er.&A. Sur. ..... T.D. 3,275 ft.; rerunning 6⅝-in. csg.

EL PASO COUNTY

Tri-State Oil Co.'s No. 1 Bobadella, 1,325 ft. from S and E lines Sur. 254, S.P. No. 7,247 ..... S.D. 2,257 ft.

FISHER COUNTY

Condor Petroleum Co.'s No. 1 Steele, 660 ft. from S and 330 ft. from W of W half of SE Sec. 210, B.B.B.&C. Ry. Sur. ..... S.D. 700 ft.

(Continued on Page 28)

WILDCAT OPERATIONS IN TEXAS PANHANDLE

Week Ending April 11

BRISCOE COUNTY

Company, well, farm name, section and block— Remarks:

Humble O. & R. Co.'s No. 1 C. Adair est., 2,500 ft. from N line, 2,100 ft. from E line, Sec. 7, Blk. G-6 ..... Drlg. 3,140 ft.

CARSON COUNTY

H. A. M. Oil Co.'s No. 2 Cooper, 330 ft. from S and E, Sec. 5, Blk. 9, I.&G.N. Sur. ..... Location.

Pulse-Shell Pet. Corp.'s No. 1 Byrum, 330 ft. from N and W, W½ NE, Sec. 138, Blk. 3, I.&G.N. Sur. ..... Rigging up.

Skelly Oil Co.'s No. 1 West Schaffer, 1,265 ft. from S and 440 ft. from W, Sec. 33, Blk. 4, I.&G.N. Sur. ..... Drlg. 2,555 ft.

Texhoma Nat. Gas Co.'s No. 1-S Burnett, center SE, Sec. 94, Blk. 5, I.&G.N. Sur. ..... Drlg. 2,255 ft.

Texoma Nat. Gas Co.'s No. 1-G Haiduk, 2,539 ft. from N, 1,531 ft. from W, Sec. 21, Blk. 4, I.&G.N. Sur. ..... Building derrick.

CHILDRESS COUNTY

C. L. Sloan et al's No. 1 B. P. Smith, Sec. 49, F. P. Knott lands ..... T.D. 5,000 ft.

COLLINGSWORTH COUNTY

Dixon et al's No. 1 Bell, 330 ft. N, 1,320 ft. W, Sec. 102, Blk. 31, H.&G.N. Sur. ..... S.D. 2,508 ft.

Downey et al's No. 1 Beasley, SE cor. SW SE, Sec. 95, Blk. 15, H.&G.N. Sur. ..... Rigging up.

DEAF SMITH COUNTY

Western Union Oil Co.'s No. 1 Farwell, C NW, Sec. 13-3n-2e ..... S.D. 275 ft.

GRAY COUNTY

Back & Barber's No. 1 Back, 660 ft. from S, 330 ft. from W, Sec. 140, Blk. 25, H.&G.N. Sur. ..... Drlg. plug 2,055 ft.

Boyes et al's No. 1 Colebank-Morse, 330 ft. NE, Sec. 65, Blk. 25, H.&G.N. Sur. ..... Spudded and S.D.

Brown et al's No. 1 Duncan, 330 ft. S and E, NW, Sec. 93, Blk. 3, I.&G.N. Sur. ..... T.D. 3,520 ft.; cleaning out.

Continental Oil Co.'s No. 1-A Wright, 330 ft. from S and E of E half NW, Sec. 13, Blk. 3, I.&G.N. Sur. ..... Location.

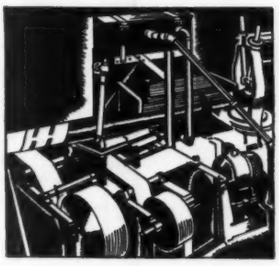
Danciger O. & R. Co.'s No. 3 Byrum, 330 ft. from N line, 330 ft. from E line, Sec. 138, Blk. 3, T.&N.O. Sur. .. T.D. 3,249 ft.; T.P. 3,110 ft.; to shoot.

Foster's No. 1 Webb, 330 ft. from S and W, Sec. 43, Blk. 25, H.&G.N. Sur. ..... Drlg. 1,160 ft.

Graham et al's No. 1 Barrett, 990 ft. from N, 330 ft. from E, Sec. 112, Blk. 3, I.&G.N. Sur. ..... Moving in material.

Granite Prod. Co.'s No. 1 Chapman, 275 ft. from N line, 110 ft. from W line, S½ SW, Sec., of Blk. 24, H. &G.N. Sur. ..... Drlg. 1,680 ft.

(Continued on Page 28)



You can't expect men to be perfect

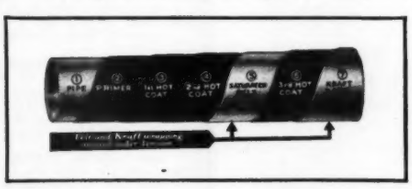
But machines have to be!

No matter how experienced men may be, they make mistakes, and the slightest mistake in wrapping and coating pipe will prove dangerous and expensive. General Paint Corporation's Hill-Hubbell Process of mill-wrapped pipe eliminates all danger of mistakes. . . . The wrapping is applied at the pipe mill under ideal conditions. The pipe is clean — free from dirt and grease and moisture. There is no waste or expensive time lost in cleaning pipe, as is the case with field application, because, with the Hill-Hubbell Process, the pipe is already clean and new.

For many years there was a demand for some method which would coat and wrap pipe, but would eliminate the imperfections of field application. General Paint Corporation's Hill-Hubbell Process of mill-coating and wrapping pipe was successfully developed in 1928. Since then the largest gas and oil companies in the United States have bought over 15,000 carloads of line pipe mill-coated and wrapped by the Hill-Hubbell Process.

The number of repeat orders received from these great companies clearly demonstrates how successfully our pipe protection has stood up under the most severe conditions. In 1928 one customer gave us two repeat orders. During 1931 many of the large gas and oil companies gave us from 10 to 21 separate orders; one of the largest utility companies gave 23 orders!

For complete information write to any of the offices of the General Paint Corporation.



Plants for coating and wrapping by the Hill-Hubbell Process are located in the following cities for the production of the pipe manufacturers listed:

CENTRAL TUBE COMPANY
Ambridge, Pa.

JONES & LAUGHLIN STEEL CORP.
Aliquippa, Pa.

NATIONAL TUBE COMPANY
Lorain, Ohio

REPUBLIC STEEL CORPORATION
Youngstown, Ohio

SPANG-CHALFANT & COMPANY
Ambridge, Pa.

YOUNGSTOWN SHEET & TUBE CO.
Indiana Harbor, Ind., and Youngstown, Ohio

HILL-HUBBELL DIVISION OF

GENERAL PAINT

CORPORATION

Portland, Ore.; Seattle, Wash.; Houston, Texas; Spokane, Wash.

New York, 11 Broadway.
Chicago, address Hill-Hubbell & Co., 105 West Adams Street.

Tulsa, Oklahoma.
Los Angeles, 544 Mateo Street.
San Francisco, 160 Fremont St.

WILDCAT OPERATIONS IN TEXAS PANHANDLE

(Continued from Page 26)

Jean Pet. Co.'s No. 1 Furneaux Bros., 330 ft. N and W, cor. SE, Sec. 200, Blk. 2-B, H.&G.N. Sur. ..... S.D. 3,010 ft.; cleaned up fishing job.

Jewel Oil Co.'s No. 1 Meers, 330 ft. from S and W, NW SW, Sec. 106, Blk. 3, I.&G.N. Sur. ..... Fishing for tools 3,307 ft.

Nelson et al's No. 1 Crews, 330 ft. S and E, NW, Sec. 13, Blk. 25, H.&G.N. Sur. ..... S.D. 2,620 ft.; estimated 4,000,000 ft. gas.

Nipper et al's No. 1 Morse, 330 ft. from N and E, Sec. 1, Blk. 26, I.&G.N. Sur. ..... Fishing 2,635 ft.

Nabob Oil Co.'s No. 1-E Morse, 330 ft. from S and W of W half SE, Sec. 67, Blk. 25, H.&G.N. Sur. ..... Location.

Operators Royalty & Prod. Co.'s No. 2 Arnold, 330 ft. from S and W, Sec. 149, Blk. 3, I.&G.N. Sur. ..... Rig.

Parton & Holt's No. 2 Morse, 330 ft. from W, 250 ft. from N, W½ SW, Sec. 5, Blk. 26, H.&G.N. Sur. .... Rigging up cable tools.

Phillips Pet. Co.'s No. 6 Wood-Wright, 330 ft. from N and E, Sec. 13, Blk. 3, I.&G.N. Sur. ..... Rigging up rotary.

Pulse-Shell Pet. Corp.'s No. 1 Culler, 330 ft. from S and E, Sec. 173, Blk. 3, I.&G.N. Sur. ..... Building rig.

Saunders et al's No. 2 Sullivan, 822 ft. from W. and 231 ft. from NE, 160 ft. S, 264 ac. of N½, Sec. 136, Blk. 3, I.&G.N. Sur. ..... Will plug back to 3,275 ft. and shoot.

Shamrock Oil & Gas Co.'s No. 3 Saunders, 330 ft. from S and W, Sec. 46, Blk. 3 ..... Rigging up rig.

Skelly Oil Co.'s No. 5 East Schaffer, 330 ft. from S and W, Sec. 172, Blk. 3, I.&G.N. Sur. ..... T.P. 3,170 ft.; T.D. 3,300 ft.; shot off pipe; cleaning out.

Skelly Oil Co.'s No. 6 East Schaffer, 440 ft. from S line and 440 ft. from E line of NE Sec. 189, I.&G.N. Sur., Blk. 3 ..... Drlg. 3,145 ft.

Skelly Oil Co.'s No. 7 East Schaffer, 440 ft. from S and W, Sec. 171, Blk. 3, I.&G.N. Sur. ..... Rigging up standard tools.

Skelly Oil Co.'s No. 8 East Schaffer, 220 ft. from N, 440 ft. from W, Sec. 172, Blk. 3, I.&G.N. Sur. ..... Drlg. 1,000 ft.

Skelly Oil Co.'s No. 9 East Schaffer, 1,320 ft. from S, 440 ft. of N½, Sec. 189, Blk. 3, I.&G.N. Sur. ..... Building derrick.

Stanolind Oil & Gas Co.'s No. 2 Waggoner, 330 ft. from N and W, Sec. 173, Blk. 3, I.&G.N. Sur. ..... T.D. 3,252 ft.; swabbed 95 bbls. in 12 hrs.

Tarber's No. 1 Saunders, 330 ft. N and W, Sec. 3, Blk. 1, B.B.&S.F. Sur. ..... Location.

Texas Co.'s No. 7 Wright, 330 ft. from N and W, Sec. 13, Blk. 3, I.&G.N. Sur. ..... Spudded 100 ft.

Travis' No. 3 Back, 330 ft. from S, 2,300 ft. from E, Sec. 44, Blk. 25, H.&G.N. Sur. ..... Spudded.

Warner Oil Co.'s No. 2 Chapman, 382 ft. N, 220 ft. W of E 20 ac. of N½ NW, Sec. 69, Blk. 25, H.&G.N. .. Location.

HUTCHINSON COUNTY

Baso's No. 1 Moore, 330 ft. from S and 330 ft. from E, in 80 ac. in NW, Sec. 21, Blk. M-21, T.C.R.R. Sur. ..... Drlg. 2,510 ft.

Combination O. & G. Co. and Alspaugh's No. 1 Johnson, 330 ft. from S line, 330 ft. from E line of NW SW, Sec. 4, Blk. Y, A.&B. Sur. ..... Drlg. 2,060 ft.

Danciger O. & R. Co.'s No. 1 Johnson, 330 ft. N and W, SE, Sec. 34, Blk. Y, A.&B. Sur. ..... Spudded and S.D.

Deal O. & G. Co.'s No. 2 Sanford, 330 ft. N and E of N 80 ac., S 160 ac., Sec. 81, Blk. 46, H.&T.C. Sur. .... S.D. 450 ft.

Huber Prod. Co.'s No. 1 Johnson Bros. (Premier), 330 ft. N and E of W 60 ac., N 80 ac., NW, Sec. 3, Blk. Y, A.&B. Sur. ..... S.D. 3,125 ft.; I.P. 10 bbls. per hr. and 500,000 ft. gas.

Huber Pet. Co.'s No. 1-A Weatherly, 330 ft. from N and W, Sec. 26, Blk. Y, A.&B. Sur. ..... Rigging up standard tools.

Liner Drlg. Co.'s No. 1-D Johnson, 330 ft. from N and E, Sec. 6, Blk. 1, B.&B. Sur. ..... S.D. 3,152 ft.; plugging back to 3,146 ft.

Oates and Marrow's No. 1 W. A. Starnes, C SE SW SE Sec. 24, M-23 T.C.R.R. Sur. ..... Drlg. 2,810 ft.

Pharis Oil Co.'s No. 5 Smith, 660 ft. from N and W, SW, Sec. 14, Blk. Y, M.&C. Sur. ..... Spudded.

Stekoll's No. 1-D Whittenburg, 330 ft. from S, 450 ft. from E, Sec. 35, Blk. M-23, H.&T.C. Sur. ..... Spudded.

Timms-Deatch's No. 4 Moore, 330 ft. N and W, Sec. 124, Blk. 4, I.&G.N. Sur. ..... Rig.

LIPSCOMB COUNTY

Okla. Public Service Co.'s No. 1 C. W. Jones, NE SW, Sec. 100, H.&T.C. Sur. ..... T.D. 5,003 ft.

MOORE COUNTY

Dogie Oil Co.'s No. 1 Greenwald, 330 ft. from N and W, Sec. 277, Blk. 44, H.&T.C. Sur. ..... T.D. 30 ft.; drlg. water well.

Dana O. & G. Co.'s No. 1 Robertson et al, 330 ft. from S and E, Sec. 165, Blk. 3-T, T.&N.O. Sur. ..... Cellar.

Interstate's No. 1 Nield, C NE, Sec. 16, Blk. 44, H.&T. C. Sur. ..... Rig up.

Magnolia Pet. Co.'s No. 1 Nield, 330 ft. from S and E of N½, Sec. 361, Blk. 44, H.&T.C. Sur. ..... Drlg. 3,475 ft.; show oil 3,421 ft.

Pollard et al's No. 1 Hall, 330 ft. S and E, NE, Sec. 131, Blk. 3-T, T.&N.O. Sur. ..... Rig on ground.

Sunray Oil Co.'s No. 2 Jones, 330 ft. N and W, W½ SW, Sec. 164, Blk. 3-T, T.&N.O. Sur. ..... Rig on ground.

Sunset Oil Co.'s No. 1 R. O. Brumley, 330 ft. from N line and 330 ft. from W line of SW, Sec. 360, H.&T.C. Sur. ..... Drlg. 3,240 ft.; estm. 15,000,000 ft. gas.

Sunset Oil Co.'s No. 1 Dore, 330 ft. from N and W, W½, Sec. 318, Blk. 44, H.&T.C. Sur. ..... Drlg. 2,770 ft.

MOTLEY COUNTY

Matador Oil Corp.'s No. 1 Owens, C NE, Sec. 10, Blk. G, B.&B. Sur. ..... S.D. 530 ft.

OLDHAM COUNTY

Amalgamated German-American Oil Corp.'s No. 1 Norton, 330 ft. S and E, Sec. 13, T.&N.O. Sur. ..... S.D. 400 ft.

Chambers et al's No. 1 Herring, CNL, Sec. 20, Blk. 8, G.C.&S.F. Sur. ..... S.D. 3,555 ft.

PARMER COUNTY

Magnolia Pet. Co.'s No. 1 Wilson, 330 ft. from N and W, SE Sec. 73, H. Kelly Sur. ..... S.D. 4,415 ft.

ROBERTS COUNTY

Chicken Creek Oil Co.'s No. 1 Ledrick, 330 ft. N and W, Sec. 55, Blk. C, G.&M. Sur. ..... T.D. 3,990 ft.

Travis et al's No. 1 Cunningham, 330 ft. S and W, Sec. 74, Blk. M-2, H.&G.N. Sur. ..... S.D. 2,690 ft.

WHEELER COUNTY

Devore & Robinson's No. 1 Sitter, 2,310 ft. from S and E of E½ of Sec. 33, Blk. 24, H.G.N. Sur. ..... S.D. 2,193 ft.

WILDCAT OPERATIONS IN WEST TEXAS

(Continued from Page 26)

Cranfill & Reynolds' No. 1 George, 400 ft. from N and 380 ft. from E, Sec. 200, Blk. 1, B.B.B.&C. Sur. ..... T.D. 5,255 ft.; to underream to deepen.

Sinclair-Prairie's No. 2 ——, 250 ft. from N and W of NE Sec. 72, H.T.&B. Sur. ..... Location.

Southern Oil Corp. of America's No. 1 Wm. Flannigan, 240 ft. from E and 165 ft. from W line of S 20 acres of SW, Sec. 20, B.B.B.&C.R.R. Sur. ..... S.D. 3,088 ft.; bldg. storage.

GLASSCOCK COUNTY

Mann et al's No. 1 fee, 330 ft. from N and 1,980 ft. from E, Sec. 27, Blk. 34, Twp. 3s, T.&P. Sur. ..... S.D. 930 ft.

Peck & Service's No. 1 Gillean, 2,310 ft. from S, 1,650 ft. from E, Sec. 21, Blk. 33, Twp. 2s, T.&P. Sur. ..... Spudding.

Penn Oil Co. et al's No. 1 F. A. Hobenstreit, 2,310 ft. from N and E lines of Sec. 47, Blk. 36, Twp. 3s, T.&P. Sur. ..... Crooked hole 275 ft.

GARZA COUNTY

Penny & Posey's No. 1 Justice, 1,980 ft. from S and 1,650 ft. from E of Sec. 25, Blk. 6, H.&G.N. Sur. (3,500-ft. cable tool test) ..... T.D. 3,320 ft.

HOWARD COUNTY

American-Maracaibo's No. 5-A Settles, 1,896 ft. from N, 1,884 ft. from W, Sec. 6, Blk. 32, T.&P. Sur. ..... Rig.

F. H. E. Oil Co.'s No. 1 Denman, 330 ft. from N, 2,310 ft. from E of Sec. 14, Blk. 30, T.&P. Sur. ..... Drlg. 2,115 ft.

Green O. & R. Co.'s No. 1 Denman, 990 ft. from S and 2,310 ft. from W, Sec. 14, Blk. 30, Twp. 1s, T.&P. Sur. .. Spudded and S.D.

Harrison's No. 2 Denman, 1,650 ft. from S and 355 ft. from E Sec. 10, Blk. 30, Twp. 1s, T.&P. Sur. ..... Location.

Myers et al's No. 1 Denman, 2,305 ft. from S and 2,320 ft. from E Sec. 14, Blk. 30, Twp. 1s, T.&P. Sur. ..... Location.

Wallace et al's No. 1 Belt, 1,960 ft. from N, 2,640 ft. from W, Sec. 12, Blk. 30-1s, T.&P. Sur. ..... Drlg. 1,240 ft.

IRION COUNTY

Apollo Oil Co.'s No. 4 Nutt, 504 ft. from N and 1,562 ft. from W of Subd. No. 6, Gonzales County School Land ..... Cellar.

Davis et al's No. 1 Suggs, 1,560 ft. from S and 925 ft. from W, Sec. 3,081, Blk. 28, H.&T.C. Sur. ..... Drlg. 7,305 ft.

Stanolind Oil & Gas Co.'s No. 1 Williams, 1,320 ft. from S and E of Sec. 1,196, T.T.R.R. Sur. ..... S.D. 7,420 ft.

JONES COUNTY

Johnson's No. 1 Huddleston, 165 ft. from S and W of N half of N half of Sec. 39, Blk. 18, T.&P. Sur. ..... Spudded and S.D.

J. M. Johnson's No. 1 Swann, 6,150 ft. from S and 1,550 ft. from E, I. Miley Sur. ..... Location.

C. S. Spelling et al's No. 1 Lillie, 200 ft. from N and W Sec. 4, E. Miller Sur. No. 2 ..... Machine.

Young et al's No. 1 Harrell, 150 ft. from S and E of N half of Sec. 8, O.A.L. Sur. ..... Location.

Abers et al's No. 1 Burton, 150 ft. from S and 175 ft. from E of 43.4-acre tract in G. Martinez Sur. ..... S.D. 1,005 ft.; temp. abnd.

Transcontinental Prod. Co.'s No. 1 Rust, 5,300 ft. N and 995 ft. W of SE cor. J. J. Hughes Sur. 556 ..... Cellar.

LOVING COUNTY

Eppenauer's No. 1 Freels, 1,263 ft. from NE, 410 ft. from NW, Sec. 92, Blk. 1, W.&N.W. Sur. ..... Rigging up.

Wm. Little's No. 1 Hugo Freels, 1,923 ft. from NE lines and 410 ft. from NW line of Sec. 92, W.&N.W. Sur., Blk. 1 ..... Drlg. 3,715 ft.

Martin's No. 1 Freels, 3,514 ft. from NE and 412 ft. from NW of Sec. 92, Blk. 1, W.&N.W. Sur. ..... Drlg. 730 ft.

Covey et al's No. 1 Wheat, 2,310 ft. from SW, 330 ft. from SE, Sec. 3, Blk. 2, W.&N.W. Sur. ..... Drlg. 345 ft.

Eppenauer Drlg. Co.'s No. 1 Allen, 465 ft. from NE and SE, Sec. 4, Blk. 2, W.&N.W. Sur. ..... S.D. 200 ft.

Ervin & Mahres' No. 1 Thrope, 2,310 ft. from E and 330 ft. from S, Sec. 46, Blk. 53, T.&P. Sur. ..... S.D. 810 ft.

Falbre & Evans' No. 1 Dean, 330 ft. from NE and 990 ft. from NW, Sec. 79, Blk. 33, H.&T.C. Sur. ..... T.D. 4,275 ft.; hole bridged after 200-qt. shot 4,170-4,250 ft.

Lewis & Slagel's No. 1 Johnson, 330 ft. from N and 1,650 ft. from W, Sec. 6, Blk. 56, Twp. 1, T.&P. Sur. .. Fishing 1,280 ft.

Lockhart & Co.'s No. 3 Bowen & Wells, 330 ft. from NE and SE of Sec. 92, Blk. 1, W.&N.W. Sur. ..... S.D. 3,385 ft.

Miller et al's No. 1 Ferguson, 990 ft. from N and E of Sec. 44, Blk. 29 ..... Spudded.

Tennant et al's No. 1 Martin, 990 ft. from NW and SW, Sec. 66, Blk. 1, W.&N.W. Sur. ..... S.D. 4,380 ft.

Thomas' No. 1 Wheat, 2,310 ft. from NW, 990 ft. from NE, Sec. 83, Blk. 1, W.&N.W. Sur. ..... Fishing 340 ft.

MENARD COUNTY

Priest's No. 1 Sorrel, 1,000 ft. from E and 200 ft. from S cor., Sec. 132, E.L.R.R. Sur. ..... S.D. 2,860 ft.

PECOS COUNTY

Anderson's No. 1 Lee Fever, 330 ft. from N and W of Sec. 78, Blk. 8, H.&G.N. Sur. ..... S.D. 2,037 ft.

Black et al's No. 1 Pecos Valley, 1,037 ft. from SE, 433 ft. from SW, Sec. 36, Blk. 3, H.&T.C. Sur. ..... S.D. 1,040 ft.

Cardinal Oil Co.'s No. 1 J. H. Tippett ("J"), 1,980 ft. from the S line and 990 ft. from the W line of Sec. 2, D. F. Robertson Sur. ..... S.D. 675 ft.; plugged back to 600 ft.

Corvette Oil Corp.'s No. 8 H. Monroe, 1,040 ft. from E line and 150 ft. from N line of Sec. 39, G.C.&S.F. Sur., Blk. 194 ..... Location.

Culberson Bros.' No. 4 Tippett, 150 ft. from N and 1,335 ft. from W of SE, Sec. 40, Blk. 194, G.C.&S.F. Sur. .. Drlg. 925 ft.

Hampton et al's No. 1 Byrne, 1,980 ft. from NW and 1,500 ft. from NE, Sec. 54, Blk. 10, H.&G.N. Sur. .... T.D. 1,395 ft.; T.P. 1,356 ft.; cleaning out after shot.

Dittman's No. 1 Sanford, 330 ft. from NW and 1,650 ft. from NE of Sec. 55, Blk. 10, H.&G.N. Sur. ..... S.D. 1,454 ft.

PRESIDIO COUNTY

Sadler et al's No. 1 Bledsoe, 2,640 ft. from N and W Sec. 15, Blk. 354, G.C.&S.F. Sur. ..... Rig.

REAGAN COUNTY

Big Lake Oil Co.'s No. 6-C University, 1,370 ft. fro mS and 1,000 ft. from E, Sec. 12, Blk. 2 ..... Drlg. 7,240 ft.

Big Lake Oil Co.'s No. 7-C University, 1,570 ft. from W and 725 ft. from S, Sec. 25, Blk. 9 ..... Location.

REEVES COUNTY

Cunningham et al's No. 1 Wright, 1,330 ft. from S and W, Sec. 58, Cassel's Sur. ..... S.D. 75 ft.

F. McDorman et al's No. 1 Ray Roberts et al, 2,310 ft. from S and E lines of Sec. 22, Blk. 59, P.S.L. Sur. ... S.D. 105 ft.

James & Milton's No. 1 Patterson, 330 ft. from N and W of Sec. 21, Blk. 72 ..... T.D. 4,133 ft.

Lee O. White et al's No. 1 Kershersor, 330 ft. from N and W lines of Sec. 5, Blk. 51, Twp. 10, T.&P. Sur. .. S.D. 5,044 ft.

RUNNELS COUNTY

Blue Bonnett Oil Co.'s No. 1 McMillan, 1,368 ft. from N and 660 ft. from W, Sec. 22, N. Travis Sur. ..... Drlg. 175 ft.

Dutton et al's No. 1 Dean, 5,475 ft. from NE and 1,048 ft. from NW in J. Heil Sur. No. 519 ..... S.O. 3,417-20 ft.; S.D. 3,600 ft.

SCHLEICHER COUNTY

Eastland Oil Co.'s No. 1 Joe Tisdale, C Sec. 29, Blk. M, G.H.&S.A. Sur. ..... Drlg. 5,420 ft.

Wesner et al's No. 1 Nicks, 2,310 ft. from N and 2,302 ft. from E of Sec. 77, Blk. LL, T.C. Sur. ..... S.D. 5,580 ft.; fishing.

George Wilson's No. 1 Page, Sec. 40, Blk. L, 1,290 ft. from N, 1,570 ft. from W, G.H.&S.A. Sur. ..... S.D. 5,053 ft.

SCURRY COUNTY

G. E. Dickman et al's No. 1 F. C. Davis, 1,000 ft. N and 1,770 ft. W of SE cor. of Sec. 275, Blk. 2, E.&T.C. Sub. ..... S.D. 5,050 ft.

Scurry County Oil Exchange's No. 1 Earnest, 2,310 ft. from N and W, Sec. 68, Blk. 2, H.&G.N. Sur. ..... Spudded and S.D.

Seifert & Dibble's No. 1 T. M. Blackburn, 2,310 ft. from N and 2,310 ft. from W line of Sec. 153, Blk. 97, H.&T.C. Sur. ..... Drlg. 4,490 ft.

TAYLOR COUNTY

Eastland Oil Co.'s No. 1 King, 150 ft. from S and E, Lot 27, Willis Sur. ..... Drlg. 380 ft.

TERRELL COUNTY

Big Bend Oil Co.'s No. 1 Bassett, C NW Sec. 155, Blk. D, M.-K.-T. Sur. ..... S.D. 2,269 ft.

The Principle of OPERATION

. . . . *is*

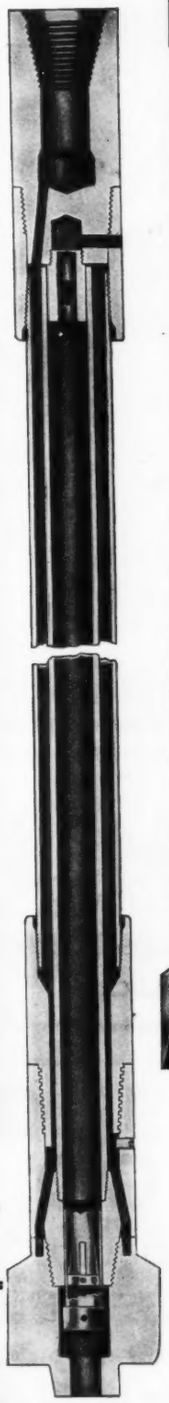
Simplicity itself . . . .

SIMPLICITY is the keynote of efficient, modern design in practical industrial products. Brewster has always been in the lead in improving the design and workmanship of the products they offer to the public. The automatic operation of the Brewster Automatic Core Barrel consists of allowing the water to pass through the inner barrel, washing it clean, until the coring begins. Then the ports are automatically closed and the water is then directed around the inner barrel and to the Bit.

The position of the valve in the top of the barrel prevents the pressure from holding the ball down. This relieves the resistance on the inner barrel, permitting the soft sand core to enter while the vent allows the fluid and oil to pass out of the inner barrel.

This Automatic Core Barrel fills a long felt want in soft sand and other coring and assures a full recovery. This Barrel is made in all sizes and lengths. It is equipped with Split Liners as are the others—Brewster Type "C" and Type "M" Core Barrels.

THE BREWSTER *AUTOMATIC* CORE BARREL



Patent No. 1,505,346

Barrel equipped with Roller Bit

By use of the Type M Bit Body ROLLER CUTTER HEADS can be used with the Perfection Core Barrel.

Type "M" Cutter Head

The Brewster COMPANY~INC.

Shreveport, Louisiana

Warehouses: The Iverson Specialty Co., Oklahoma City, Oklahoma, Phone 2-2833; The Brewster Houston Store, 2000 Harrington Street, Capitol 2031; Longview, Texas, 313 E. Cotton St., Phone 781.

Export Distributors: Acme Well Supply Company, Inc., 136 Liberty Street, New York City.

CB-1

Keck Pecos Trust Co.'s No. 1 Hamilton, C Sec. 6, Georgetown Ry. Sur. ....S.D. 3,150 ft.; moved off tools.
Miller Bros.' No. 1 Allison & Burke, C NW Sec. 10, Blk. 176, T.&P. Sur. ....S.D. 120 ft.
Mid-Kansas Oil & Gas Co.'s No. 1 Goode, 2,152 ft. from E and 330 ft. from S, Sec. 26, Blk. 161, G.C.&S.F. Sur. ....S.D. 6,120 ft.
Jones et al's No. 1 Pankenham, C SE NW Sec. 43, Blk. B-2, C.C.S.D.&R.G.N.G. Sur. ....S.D. 2,545 ft.
Sides et al's No. 1 Phelps, 2,157 ft. from N and 2,482 ft. from W, Sec. 5, G. W. Hurley Sur. ....S.D. 1,000 ft.

TOM GREEN COUNTY

Andrews' No. 1 Pugh, 350 ft. from N and 5,184 ft. from E, James Eldridge Sur. No. 73 ....S.D. 453 ft.
Belding & Dutton's No. 1 Norsworthy, 1,640 ft. from S and 587 ft. from E of John McNeese Sur. ....S.D. 760 ft.; S.O. and gas 725 ft.
Mintex Oil Co.'s No. 1 Campbell Est., 446 ft. from S and 630 ft. from W of Sec. 180, Dist. No. 11, S.P. Sur. ....S.D. 1,994 ft.
Pratt & Hancock's No. 2 Lewis, 100 ft. N and 330 ft. E of most northerly SW cor. of Joshua S. Grant Sur. No. 2 ....S.D. 200 ft.

UPTON COUNTY

Farley et al's No. 1-B Lone, 2,310 ft. from N and E, Sec. 36, Blk. 1, M.-K.-T. Sur. ....Drlg. 1,750 ft.

VAL VERDE COUNTY

Couch et al's No. 1 J. P. Yoas, 1,300 ft. from the N line and E line of Sec. 31, Blk. 1 ,I.&G.N. Sur. ....S. D. 220 ft.
Independent Operators' No. 1 Whitehead, SE SE Sec. 10, Blk. 4, I.&G.N. Sur., elev. 1,175 ft. ....S.D. 5,360 ft.
O. O. Owens' No. 1 Mills, Sec. 128, Blk. 1, I.&G.N. Sur., elev 2,130 ft. ....S.D. 6,780 ft.

WARD COUNTY

Abell Bros.' No. 1 Sloan, 330 ft. from NW and NE, Sec. 24, Blk. 5, H.&T.C. Sur. ....T.D. 2,490 ft.; cleaning out; flowed 110 bbls. first 24 hrs.
Abell Bros. et al's No. 1 Smith, 330 ft. from NE and NW, Sec. 4, Blk. 34, H.&T.C. Sur. ....Rigging up.
Bradford & Bentley's No. 1 B. Carson, 1,650 ft. from the NE line and 990 ft. from the SE line of Sec. 26, H.&T.C. Sur., Blk. " ....Drlg. 770 ft.
Buck Sturm et al's No. 2 R. H. Gill, 2,310 ft. from SW line and 330 ft. from SE line, Sec. 25, Blk. B-29, P.S.L. Sur. ....Top pay 2,473 ft.; swabbing 65 bbls. per day.
Eastland Oil Co.'s No. 1 Weiss, 2,365 ft. from SE and SW, Sec. 4, Blk. 34, H.&T.C. Sur. ....Rigging up.
Eppenauer's No. 1 Purcell, 365 ft. from SW and 1,650 ft. from SE of Sec. 17, Blk. 14, H.&T.C. Sur. ....T.D. 2,497 ft.; to tube.
Eppenauer Drlg. Co.'s No. 1 Townsend-Moore, 990 ft. from SE and 330 ft. from SW, Sec. 17, Blk. 34, H.&T.C. Sur. ....Spudded and S.D.
H. V. Greer's No. 1 Carr, 150 ft. from NW and 510 ft. from SW, Sec. 12, Blk. 5, H.&T.C. Sur. ....S.D. 2,065 ft.
Gulf Prod. Co.'s No. 10 Hutchings, 330 ft. from N and W of 5,370 acres, Sec. 5, Blk. F, G.M.B.&A. Sur. ....Drlg. 2,730 ft.; hole loaded.
Gulf Prod. Co.'s No. 31 O'Brien, 2,567 ft. from N, 330 ft. from E of Sec. 16, Blk. F ....Drlg. 1,000 ft.
Massie et al's No. 1 Stewart, 330 ft. from SW and SE, Sec. 12, Blk. 14, H.&T.C. Cur. ....Drlg. 925 ft.
Moran & Burkhart's No. 2 J. T. Sweatt et al, 3,310 ft. from SW, Sec. 1, J. Howe Sur. ....S.D. 821 ft.
Moran & Miles' No. 1 Boogher, 3,603 ft. from NE and 1,303 ft. from SE, Sec. 11, Blk. 5, H.&T.C. Sur. ....S.D. 2,040 ft.
R. F. Owen's No. 1 Lee, 1,344 ft. from NW and 4,532 ft. from SW, Sec. 1, J. Howe Sur. ....S.D. 940 ft.
Plains Prod. Co.' and Simms Oil Co.'s No. 1 Benton Land Co., 440 ft. from the SE and 440 ft. from SW lines of Sec. 26, W.&N.W.R.R. Sur., Blk. 1 ....Drlg. 740 ft.
Rector Oil Co.'s No. 1 Smith, 1,320 ft. from N and E, Sec. 22, Blk. A, G.M.M.B.&A. Sur. ....S.D. 3,602 ft.
Richardson et al's No. 8 O'Brien, 1,372 ft. from N, 330 ft. from W, Sec. 5, Blk. F ....Drlg. 550 ft.
Richardson et al's No. 7 O'Brien, 1,980 ft. from N and 330 ft. from W Sec. 5, Blk. F ....Drlg. 2,165 ft.
Rixford et al's No. 1 Green, 330 ft. from NW and SW Sec. 4, Blk. 34, H.&T.C. Sur. ....Drlg. 1,005 ft.
Stanolind Oil & Gas Co.'s No. 1 Cannon, 3,300 ft. from SE and 1,649 ft. from NE, Sec. 29, Blk. B-29 ....S.D. 2,686 ft.
T. P. Coal & Oil Co.'s No. 2 James, 330 ft. from NW and NE Sec. 5, Blk. 34 ....Drlg. 1,050 ft.
White et al's No. 1 Burtner, 150 ft. from NE and 515 ft. from SE of Sec. 8, Blk. 32, H.&T.C. Sur. ....S.D. 755 ft.

WINKLER COUNTY

Adams et al's No. 1 Scarborough, 660 ft. from N and E Sec. 1, Blk. 77, P.S.L. ....Location.
Liner Drlg. Co.'s No. 1 Campbell, 350 ft. from N and E cor., Sec. 2, Blk. B-5 ....S.D. 4,640 ft.
Sid Richardson's No. 1 S. M.Halley, 330 ft. from the S line and 1,650 ft. from the E line, Sec. 25, School Blk. B-12 ....Filled up 350 ft. with salt water from 2,047-56 ft.; will abandon; T.D. 3,061 ft.

EAST AND EAST CENTRAL TEXAS WILDCATS

(Continued from Page 25)

Wilson & Stubbs' No. 1 L. Robert, 450 ft. from S and 150 ft. from W line of lease, J. B. Wolfin Sur. ....S.D. 2,035 ft.; will skid derrick.

DALLAS COUNTY

Long Creek Dev. Co.'s No. 1 T. J. Lupton, center of 160-ac. tract, 3¼ miles N of Mesquite, J. Johnson Sur. ....Rig up.
Paris' No. 2 Wilkinson, 2,787 ft. from NW and 3,241 ft. from SW of John P. Anderson Sur. ....T.D. 1,230 ft.; S.D.

DELTA COUNTY

Joiner et al's No. 1 W. H. Martin, 330 ft. from N line and midway between E and W lines of survey and lease on 2,749-ac. tract, D. Parker Sur. ....Location.
Joiner et al's No. 1 Blackwell, 800 ft. S and 150 ft. from E lines of 275-ac. tract, Dunnetelle Sur. ....Drlg. 650 ft.
Worthington et al's No. 1 Pejernett, 776 ft. from S and 150 ft. from W in E. Chick Sur., 1½ miles W of Horton ....S.D. 3,315 ft.

ELLIS COUNTY

Community's No. 1 Reeves ....Waiting on cmt. to set 100 ft.
E. M. Rogers' No. 1 John Lee Winn, 1,650 ft. from E and 150 ft. from S of Orland, Orlo Wheeler Sur. ....S.D. 1,435 ft.

FRANKLIN COUNTY

Tom Harper's No. 1 fee, 150 ft. from N line and 200 ft. from E line of 116-ac. tr., W. M. Dawson Sur. ....S.D. 520 ft.

GREGG COUNTY

Adams and Lyles' No. 1 J. H. Sheppard, 500 ft. S and 400 ft. E of SW cor. of Galvey 45-ac. lease, T. Allen Sur. ....Derrick.
Amerada Petroleum Corp.'s No. 1 C. Jenkins, 345 ft. from N line and 1,510 ft. from W line of 50-ac. lease, John Wilkinson Sur. ....Drlg. 2,360 ft.
Arkansas Fuel Oil Co.'s No. 1 Taylor Lee, 330 ft. out of NW cor. of 52.1-ac. lease, William Robinson Sur. ....Rig up.
Atlantic Oil Producing Co.'s No. 1 T. B. Harris, 330 ft. from most easterly E line and center of N and S lines of lease, W. H. Castleberry Sur. ....Rig up.
Atlantic Oil Producing Co.'s No. 1 H. Pritchard, 330 ft. from N and E lines of lease, F. W. Johnson Sur. ....Location.
M. T. Beeler's No. 1 Finley and Thomas, 150 ft. from N and 150 ft. from W of 10-ac. lease, C. H. Alexander Sur. ....Rig up.
Big Indian Oil Co.'s No. 1 W. R. Nicholson, 330 ft. from S line and 4,783 ft. from E line of tract, M. Mann Sur. ....Drlg. 1,850 ft.
Blacknight Oil Co.'s No. 1 J. G. McGrede, 415 ft. S and 310 ft. W of NW cor. of Sun Oil Co.'s J. C. McKinley 80-ac. lease, D. Sanches Sur. ....Drlg. 2,950 ft.
Will Brown's No. 1 E. Choice, 400 ft. due east of Collins' No. 1 H. T. Elder ....Derrick.
O. R. Cooper's No. 1 J. C. Clayborn, 536 ft. S and 753 ft. W of most easterly NE cor. of Gulf's Clayborn lease, I. Beaty Sur. ....Preparing to spud.
D. D. D. Oil Co.'s No. 1 Sarah Dansby, 283 ft. from N and S lines and 330 ft. from E line of lease, W. P. Chisum Sur. ....Waiting on cmt. to set; T.D. 3,725 ft.
Dodd and Markey's No. 1 J. F. Holt, 615 ft. E and 707 ft. N of SW cor. of 200-ac. tract, H. Edwards Sur. ....Derrick.
East Texas Refining Co.'s No. 1 J. W. Fuller, 330 ft. from W line and 300 ft. from S line of 50-ac. lease, D. Sanches Sur. ....Coring 3,636 ft.; testing.
Harry M. Edwards' No. 1 Starr Estate, 200 ft. from N line and center of E and W lines of 12.5-ac. lease, D. Sanches Sur. ....Drlg. 2,700 ft.
Empire Gas & Fuel Oil Co.'s No. 1 E. L. Walker, 400 ft. from S line and 220 ft. from E line of lease, John Tate Sur. ....Location.
Mike Glasscock et al's No. 1 Bacle, 409 ft. from E line and center of N and S lines of 5.97-ac. lease, G. W. Hooper Sur. ....Drlg. 400 ft.
Lewis Godlin's No. 1 E. L. Walker, 330 ft. N of road, 330 ft. from E line of 80.2-ac. tract, M. Dillard Sur. ....Derrick.
Gulf Production Co.'s No. 1 E. L. Walker, 810 ft. N and 370 ft. W of SE cor. of lease, John Tate Sur. ....Preparing to test 3,529 ft.
S. A. Guiberson et al's No. 1 J. M. Christian, 150 ft. from W line and center N and S lines of 8.77-ac. lease, G. W. Hooper Sur. ....Location.
Hastings et al's No. 1 Wallace, due SE offset to Victory Smith's No. 1 Knowles, M. Tennison Sur. ....Drlg. 2,981 ft.
Iowa Payne's No. 1 Jim Gray, center of 10-ac. lease and tract, M. Tennison Sur. ....Moving in rig.
K. B. Oil Co.'s No. 1 Dickson, 150 ft. from S and 150 ft. from W of 5-ac. lease, Mary Van Winkle Sur. ....S.D. 700 ft.
Lucy Petroleum Co.'s No. 1 B. C. Christian, 330 ft. from W line and center of N and S lines of 8-ac. lease, G. W. Hooper Sur. ....Waiting on cmt. to set 3,576 ft.
Magnolia Petroleum Co.'s No. 1 Zeigler, 330 ft. out of NW cor. of 50-ac. lease, B. N. Hampton Sur. ....Testing; T.D. 3,473 ft.
McLemore et al's No. 1 Adkins, 330 ft. N and 150 ft. W of SW cor. of Gulf Lingley lease, D. Dainwood Sur. ....Drlg. 3,681 ft.
McMahon et al's No. 1 Elder, 123 ft. E of Collins' No. 1 Elder, Mary Van Winkle Sur. ....Drlg. 3,200 ft.
Jim McMurray et al's No. 1 J. H. Alexander, center of E 2 acres of 50-ac. tract, D. Sanches Sur. ....Waiting on cmt. to set; T.D. 3,598 ft.
Miller and Lacy's No. 1 W. R. Nicholson, 330 ft. from S line and center of E and W lines of 39-ac. lease, M. Mann Sur. ....Location.
Newman et al's No. 1 A. V. Bacle, 426 ft. S and 250 ft. W of NW cor. of Barnsdall's McGrede lease, G. W. Hooper Sur. ....Rig up.
J. D. Patty, et al's No. 1 J. C. McCormick, 207 ft. SE at right angles to Gladewater-Tyler road and 540 ft. SW of Abernathy and Kirkpatrick's No. 1 Gregston, M. Dillard Sur. ....T.D. 100 ft.
E. A. Payne et al's No. 1 R. M. Woods, 20 ft. from S line and 21 ft. from W line of 2.13-ac. lease, H. R. Holit Sur. ....Derrick.
Pennsylvania Oil & Refining Co.'s No. 1 Bonner, 693 ft. W and 330 ft. S of most easterly NE cor. of survey, James McRae Sur. ....Location.
Perry-Crews' No. 1 Clayborn, 246 ft. S along E line of C. G. Strong 50-ac. tract, I. Baty Sur. ....Drlg. 2,450 ft.
Pilot Oil Co.'s No. 1 H. Smith, center of 3.87-ac. lease, William Robinson Sur. ....Waiting on cmt. to set; T.D. 3,590 ft.
Powell and Irion's No. 1 T.&P., 146 ft. from N line and 80 ft. from W line of Blk. No. 12, H. R. Hokit Sur. ....Waiting on cmt. to set 3,587 ft.
Pruitt and Standberry's No. 1 M. B. Hughey, Blk. No. 150, Kilgore Townsite, Mary Van Winkle Sur. ....Derrick.
Reeves et al's No. 1 W. L. Hestland, center of five-eighths-acre tract, midway from Lampton Church and Sarson's No. 2 Hall, D. Sanches Sur. ....Derrick.
Ross et al's No. 1, located on Findley & Thomas 50-ac. tract, 150 ft. from S line and 6.66-ac. lease, C. H. Alexander Sur. ....Derrick.
Frank Russell's No. 1 M. Dickson, Blk. No. 134, Kilgore Townsite, Mary Van Winkle Sur. ....Swabbing; T.D. 3,571 ft.
Shell Pet. Corp.'s No. 1 S. C. Fishborn, 330 ft. from N and E lines of 100-ac. lease, F. W. Johnson Sur. ....Location.
Showers and Moncrief's No. 1 J. M. Christian, 177 ft. from N and S lines and 265 ft. from E and W lines of 4.33-ac. lease, G. W. Hooper Sur. ....Rig up.
Silver Star Oil Co.'s No. 1 Finley and Thomas, 150 ft. from SE line and center of N and S lines of 8-ac. lease, C. H. Alexander Sur. ....Derrick.
Silver Star Oil Co.'s No. 1 Pine Hill School, center of S 1-ac. and 3-ac. tract, H. Hathaway Sur. ....Drlg. 1,950 ft.
Simms Oil Co.'s No. 1 W. R. Nicholson, 330 ft. from N line and 284 ft. from E line of 801-ac. lease, M. Mann Sur. ....Location.
V. C. Smith's No. 1 M. B. Hughey, center of Blk. No. 123, Mary Van Winkle Sur. ....Drlg. 2,950 ft.
Victor C. Smith's No. 1 Knowles, center of Blk. 134, Mary Van Winkle Sur. ....Derrick.
Solar Exploration Co.'s No. 1 J. S. and F. Elder, 840 ft. E of Magnolia E line and 330 ft. from S line of Solar lease, M. V. Winkle Sur. ....Rig up.
T. J. Tucker's No. 1 Mary Rufus, center of one-half-acre tract, Mary Van Winkle Sur. ....Drlg. 3,485 ft.
Valentine Oil Co.'s No. 1 Goyne-Hughey, 5,100 ft. from S and 6,800 ft. from W of survey, Mary Van Winkle Sur. ....Rig up.
Ward Oil Co.'s No. 1 Nicholson, 353 ft. from S line and 3,250 ft. from E line of lease, M. Mann Sur. ....Derrick.
H. E. Wrenn's No. 1 A. A. King, 150 ft. from S and E lines of 79-ac. lease, W. P. Chisum Sur. ....Derrick.
F. P. Wolverton's No. 1 Claude Lee, 40 ft. from S line and 103 ft. from W line of 1-ac. tract, L. J. Rigsby Sur. ....Rig up.

HILL COUNTY

Sherman-Houseman's No. 1 J. P. Griffith, in Samuel Waddell Sur. ....S.D. 3,256 ft.

HOPKINS COUNTY

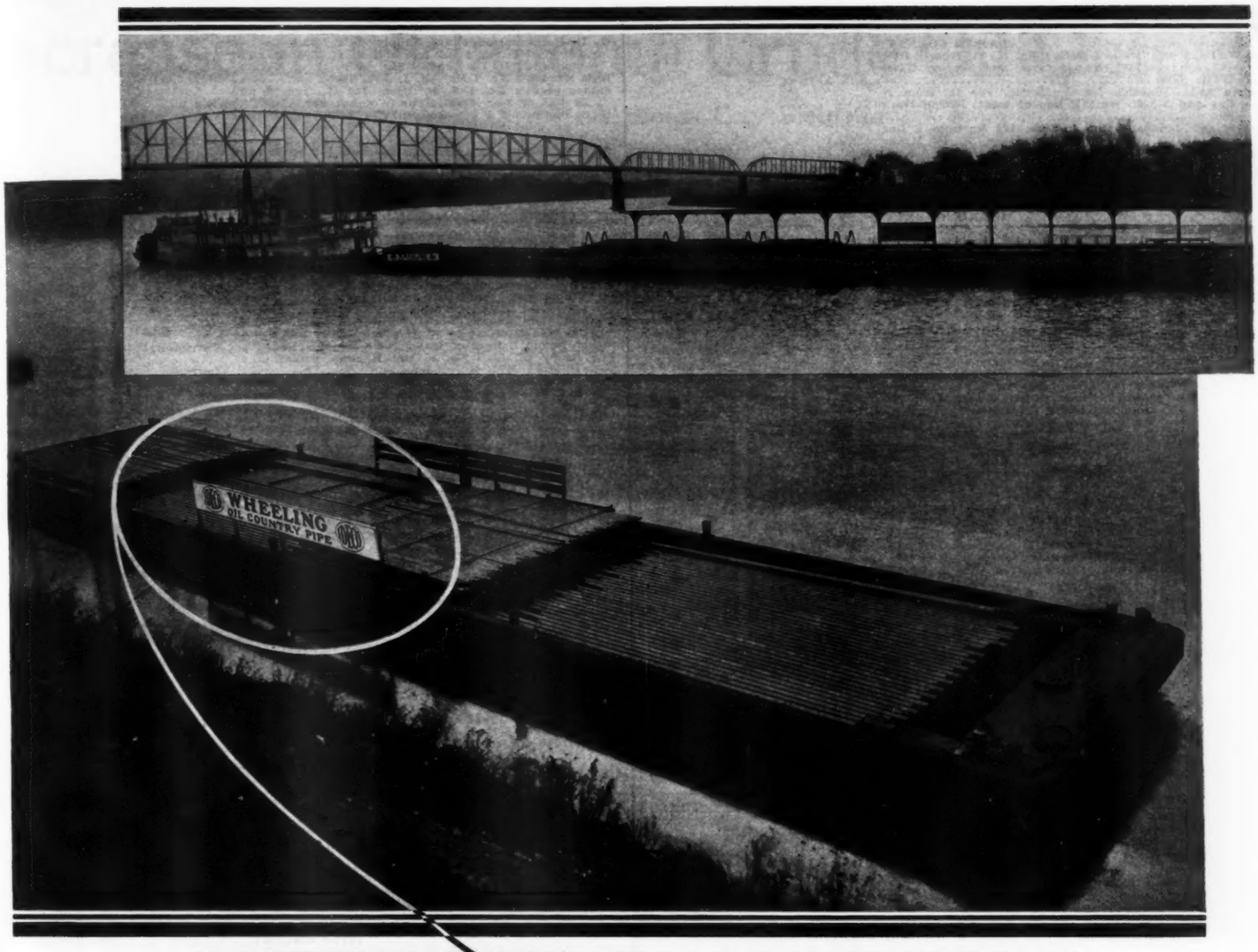
Roark et al's No. 1 Taylor, 220 ft. from N and W lines of 80-ac. tract in the John Polk Sur. ....S.D. 540 ft.

HOUSTON COUNTY

Ramsland and Ramsland's No. 1 Pennington, 750 varas W of E line and 500 varas from S line of survey on 186-ac. tract, Ramond LaGarza Sur. ....Drlg. 2,580 ft.
C. T. McManus' No. 1 Harron, 300 ft. out of NE cor. of 327-ac. tract, J. P. Procella Sur. ....Spudded and S.D. 37 ft.

HUNT COUNTY

Branson et al's No. 1 Gray ....Location.
Russell et al's No. 1 Brooks and Quattlebaum ....S.D. 1,455 ft.



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KAUFMAN COUNTY

Standy Darnell et al's No. 1 Sally Pannill .....T.D. 1,628 ft.

LAMAR COUNTY

G. W. Davy et al's No. 1 McGustion, 450 ft. from S line, 456 ft. from W line of farm and survey, Galet Wood Sur. .....S.D. 2,880 ft.

Doyle and Jondeau's No. 1 Martin, 990 ft. from N line and 330 ft. from E line of tract, Joseph Deck Sur. .....S.D. 1,070 ft.

Doyle and Jondeau's No. 1 Horn, 226 ft. from S line and 608 ft. from E line of lease, R. P. Mayor Sur. .....S.D. 2,254 ft.

LEON COUNTY

Salzer Drlg. Co.'s No. 1 Dr. J. M. Blair, 1,010 ft. from N line, 1,986 ft. from W line, Sec. 19, Blk. E, Lucia Hibbard Sur. .....Derrick on ground.

MORRIS COUNTY

Leonard's (Tucker-Fullwood) No. 1 P. M. Staggers, 450 ft. from N line and 150 ft. from E line of 65.5-ac. tract, J. D. Nelson Sur. .....S.D. 3,535 ft.

NACOGDOCHES COUNTY

Adams et al's No. 1 Fuller Brothers, located in a 269-ac. tract, Jose Flores Sur. .....Location.

Gainer et al's No. 1 Nice Well, 13 miles SE of Nacogdoches, 600 ft. from S and 150 ft. from W of Wells tract in A. Cherino Sur. .....S.D. 3,430 ft.

Joiner and Henson's No. 1 Andy Legg, 330 ft. from N and 330 ft. from W of tract, John Durst Sur. .....S.D. 3,920 ft.

Scully & Harwell's No. 1 R. I. Driver, 1,500 ft. from SE cor. of P. B. Ballard 125-ac. tract, 15 miles SE of Nacogdoches in Patricia De Torres Sur. .....S.D. 3,808 ft.

Taylor-Vaughn's No. 1 Dixon Greer, 160 ft. from W and 450 ft. from N lines of 60-ac. tract in the M. G. Horrera Sur. .....S.D. 265 ft.

Creighton Drlg. Co.'s No. 1 J. N. Stewart, center of 79-ac. tract in the Jose Ignacio Y. Barbo Sur. .....S.D. 3,226 ft.

POLK COUNTY

Sunshine Oil Co.'s No. 1 Brawley, 150 ft. from S line and 250 ft. from E line of W 100 acres of lease, F. Johnson Sur. .....Derrick.

RAINS COUNTY

C. H. Bayliss' No. 1 Ownby, 150 ft. N and 1,100 ft. from E of most easterly SE cor. of survey, Alexander Sur. .....S.D. 4,036 ft.; to drill deeper.

Greer et al's No. 1 Roy Harper, 150 ft. from S line and E line of tract, 4 miles N of Ginger, David Rose Sur. .....Drlg. 4,090 ft.

RED RIVER COUNTY

Hoffman and Henson's No. 1 H. H. Lennox, 2,790 ft. W and 300 ft. S of most easterly NE cor. of survey, J. E. Edmondson Sur. .....S.D. 60 ft.

Concord Oil Co.'s No. 1 J. R. Dellahunty, 500 ft. from N of Isaac Moore Sur. and 200 ft. E of E line of Robert Glass Sur. .....S.D. 2,546 ft. (corrected).

ROCKWALL COUNTY

Bucanner Oil Co.'s No. 1 H. L. Lofland, center of 69-ac. tract in W. M. Bird Sur. .....Set 10-in. csg. 120 ft.

RUSK COUNTY

Anderson et al's No. 1 E. B. Alford, center of Blk. No. 3, I. Parker Sur. .....S.D. 2,200 ft.

Archer et al's No. 1 Stewart, W offset to Humble's No. 2 W. B. Key, John Womack Sur. .....Location.

Beard and Hammon's No. 1 H. Alexander, 330 ft. from W line and midway between N and S lines of 25-ac. lease, T. Grace Sur. .....Set csg.

J. Earl Brown's No. 1 Arnold, 990 ft. from E and 330 ft. from S line of Arnold 128-ac. farm, William Christian Sur. .....Drlg. 2,900 ft.

Butler and Calhoun's No. 1 C. C. Lowe, 325 ft. from N line and 200 ft. from E line of 85-ac. lease, W. G. Tutt Sur. .....Derrick.

Byrd-Frost's No. 1 Buckner, J. E. Peyton Sur. .....T.D. 4,077 ft.

Combine Oil Interest's No. 1 G. W. Eaton, E offset to Gulf's No. 1-A Rayford, F. Cordova Sur. .....Derrick.

O. R. Cooper's No. 1 E. E. Moores, center of 1½-ac. lease, J. B. De Cadena Sur. .....Drlg. 1,706 ft.

Everett Drilling Co.'s No. 1 Colvert School, center of 2-ac. tract, D. Clark Sur. .....Rig up.

R. W. Fair and C. L. Thompson's No. 1 W. E. Wylie, 330 ft. from S line and 330 ft. from W line of 27-ac. lease, Juan Ximenes Sur. .....Set csg.; T.D. 3,535 ft.

E. P. Florey's No. 1 E. B. Alford, center of 3-ac. lease, Isaac Parker Sur. .....Derrick.

Gant-Gerwin and Wegener's No. 1 L. A. Till, 330 ft. from N line and 464 ft. from W and E line of 26-ac. lease and tract, M. V. Pena Sur. .....Drlg. 3,412 ft.

Halo and Hatchfield's No. 1 C. J. Goforth, 625 ft. from S line and 450 ft. from W line of 13.4-ac. tract, M. J. Pru Sur. .....Rig up and S.D.

Harris and Russell's No. 1 T. W. Harris, 330 ft. from S line and 660 ft. from W line of most southerly SW cor. of 160-ac. tract, 3 miles SW of Henderson, W. G. Davis Sur. .....Derrick.

Hathaway et al's No. 1 Gray, J. M. McLain Sur. .....S.D. 3,365 ft.

Heiden-Rodgerson et al's No. 1 Barton and Birdwell, N offset to Reisinger et al's No. 1 Barton, W. G. Tutt Sur. .....Drlg. 3,085 ft.

Holland et al's No. 1 S. E. Brox, 330 ft. from N line and 250 ft. from W line of 20-ac. lease, Thomas Grey Sur. .....Derrick.

W. F. Hollifield's No. 1 Wylie, 160 ft. from W and E line and 330 ft. from S line of 10-ac. lease, Juan Ximenes Sur. .....Rig up.

Howell's No. 1 Irion and Motley, 200 ft. from N line, 1,270 ft. from W line of survey, J. Lindley Sur. .....Drlg. 3,706 ft.

Hudspeth's No. 1 E. B. Alford, center of Lot No. 35, T. J. Moore Sur. .....Derrick.

T. F. Hunter's No. 1 J. Johnson, 330 ft. from E line and 171 ft. from N line of 13-ac. lease, H. B. Dance Sur. .....Running tubing 3,784 ft.

T. A. Johnson's No. 1 J. H. Stewart, 245 ft. from NW line and 275 ft. from E line of 20-ac. lease, John Womack Sur. .....Bldg. derrick.

LaSalle-Davenport and Bledsoe's No. 1 Church, 175 ft. S and 175 ft. E of SE cor. of Sun-Schuler joint lease, J. B. DeCadena Sur. .....Rig up.

Mack Oil Corp.'s No. 1 S. H. Arnold, 300 ft. from S line and 1,200 ft. from E line of 128-ac. tract, W. G. Christian Sur. .....S.D.; repair boiler.

Magnolia Petroleum Co.'s No. 1 W. B. Key, 330 ft. from S line and 330 ft. from E line of 56.41-ac. lease, John Lindley Sur. .....Drlg. 2,916 ft.

McPhail and Kimbrough's No. 1 E. A. Thrash, 150 ft. from N and W line of 4-ac. lease, Juan Ximenes Sur. .....S.D. 2,500 ft.

Mid-Kansas Oil & Gas Co.'s No. 1 D. Ledbetter, 425 ft. from S line and 1,165 ft. from E line of 157-ac. lease, W. J. Roan Sur. .....Drlg. 2,010 ft.

Mid-Kansas Oil & Gas Co.'s No. 1 R. M. Weaver, 330 ft. from N line and 412 ft. from W and E lines of 40-ac. tract, W. J. Roan Sur. .....Location.

Mullins and Strickland's No. 1 Brewer Cemetery, 330 ft. from N and 51 ft. E of NW cor. of Stanolind McCord 30-ac. lease, M. V. Pena Sur. .....Rig up.

Murray and Goode's No. 1 Leath, 648 ft. from S line and 339 ft. from W line of 111-ac. tract, D. Clark Sur. .....Drlg. 2,600 ft.

Pace Petroleum Co.'s No. 1 Wells, W offset to East Texas, W. P. Chisum Sur. .....Derrick.

Pansy Oil Co.'s No. 1 E. B. Alford, center of Blk. No. 50, T. J. Moore Sur. .....Drlg. 2,960 ft.

D. B. Reed and Standard Supply Co.'s No. 1 Church, 121 ft. NE along SE line and 86 ft. NW at right angles, J. B. De Cadena Sur. .....Derrick.

Ross Seward's No. 1 Burton, J. J. Y'Barbo Sur. .....S.D. 3,077 ft.

Sabins et al's No. 1 J. R. Irion, 330 ft. from S and E line of 2-ac. tract, John Womack Sur. .....Rig up.

H. G. Sampson's No. 1 Goforth, 200 ft. NE along road from most northerly NE cor. of Cloud's lease and 50 ft. S at right angles .....Drlg. 3,010 ft.

R. E. L. Silvey's No. 1 P. G. Warren, 155 ft. from S line and 96 ft. from E line of 44-ac. tract, John Womack Sur. .....Drlg. 2,841 ft.

Jay Simmon's No. 1 D. C. Joyner, 2,050 ft. from S line and 300 ft. from W line of 74.11-ac. tract, F. Cordova Sur. .....Derrick.

Sinclair Oil & Gas Co.'s No. 1 W. G. Grissom, 330 ft. from N line and 330 ft. from E line of 50-ac. lease, W. D. Porter Sur. .....Drlg. 2,725 ft.

Spansco Oil Co.'s No. 1 J. R. Alford, center of Lot No. 33, T. J. Moore Sur. .....Swabbing 3,612 ft.

J. E. Stone Lumber Co. and Imperator Oil Co.'s No. 1 School Lot, center of School Lot, J. B. Cadena Sur. .....Drlg. 3,505 ft.

Taubert and McKee's No. 1 Tolliver, 150 ft. from W line and E offset to Ward's No. 5 Giles and center of N and S lines of lease, Juan Ximenes Sur. .....Derrick.

Tex Jersey Oil Co.'s No. 1 Cora Hannah, center of 6-ac. lease, J. B. De Cadena Sur. .....Derrick.

Trico Oil Co.'s No. 1 Pinkston, skidded derrick 60 ft. E of old Phillips junked hole, J. B. De Cadena Sur. .....Drlg. 3,490 ft.

Weaver-Crim's No. 1 F. Bean, 175 ft. from NW line and 212 ft. from S line of 16-ac. lease, Mary Cogswell Sur. .....Derrick.

JOINER POOL—RUSK COUNTY

Armstrong's No. 1 Alford, 151 ft. from S and 1,080 ft. from W of survey, T. J. Moore Sur. .....Derrick.

Paulett et al's No. 1 Ed Sparks, 350 ft. from E, 150 ft. from S of survey, L. C. Riggs Sur. .....S.D. 1,465 ft.

SAN AUGUSTINE COUNTY

A. H. Jones and Tennant's No. 1 A. P. Davis .....Drlg. 3,483 ft.

SMITH COUNTY

Acme Oil Co.'s No. 1 Horton, 330 ft. from N and W lines of tract, Mar Sewell Sur. .....T.D. 3,900 ft.

British-American's No. 1 M. L. Thompson, 330 ft. from N and W lines of 64.52-ac. lease, Isaac Moore Sur. ....Waiting on cmt. to set 3,658 ft.

Droppleman and Bunte's No. 1 Atkinson, 1,000 ft. N of old location SE of Starrville .....Drlg. 1,350 ft.

Hasmussen et al's No. 1 S. S. Cooke, 723 ft. E and 554 ft. S of SW cor. of Mayfield 99-ac. tract, Juan Vargus Sur. .....S.D. 2,900 ft.

Hawkins and Sutton's No. 1 Church, 345 ft. from S line and center of E and W lines of 3.73-ac. lease, James Jordan Sur. .....Drlg. 2,950 ft.

J. E. Lucas' No. 1 Henry Jackson, 150 ft. from N and E lines of 25-ac. tract, James Jordan Sur. ....Rig up and S.D.

Lucas & Hobbe's No. 1 L. S. Sartin, 214 ft. from S line and 330 ft. from E line of 10-ac. lease and 76-ac. tract, James Jordan Sur. .....Made 60 per cent salt water; swabbing; T.D. 3,807 ft.

Weaver-Crim Corp.'s No. 1 Stone and Lee, 330 ft. from E line and 530 ft. S of Sessions' No. 1 Attaway, D. Shaw Sur. .....T.D. 3,020 ft.

Sinclair Oil & Gas Co.'s No. 1 E. E. Moore, 330 ft. from S and E lines of 97-ac. lease, Juan Vargus Sur. .....Drlg. 2,840 ft.

Sun Oil Co.'s No. 1 St. Clair, 330 ft. from N and E lines of 100-ac. tract, Juan Vargus Sur. .....Set surface csg.

Tulsa Oil Co.'s No. 1 M. L. Thompson, 330 ft. from N and W lines of 59-ac. lease, Isaac Moore Sur. .....Spudding.

Zion Oil Co.'s No. 1 Sartin, 665 ft. N and 328 ft. W of SW cor. of Mayfield 94-ac. tract, James Jordan Sur. .....Running csg. 3,801 ft.

TITUS COUNTY

Perry V. Cook's No. 1 M. C. Rogers, center of SW of Moore Sur. .....S.D. 4,027 ft .

UPSHUR COUNTY

L. G. Bradstreet et al's No. 1 O. M. Victory, 330 ft. from N and E lines of 10-ac. lease, E. A. J. Evans Sur. .....Location.

Flanigan Production Co.'s No. 1 Whitehurst, 330 ft. from N and E lines of N 30 acres of W 40 acres of 100-ac. tract, McKinney and Williams Sur. .....Bldg.derrick.

Pat Hudson et al's No. 1 D. F. Smith, 330 ft. out of SE cor. of W 100 acres of the N 200 acres of the 272-ac. lease, 3 miles E and 1½ miles N of Cranfill & Reynolds' No. 1 Rash, John Denson Sur. .....Drlg. 2,710 ft.

Lester et al's No. 1 J. Jones, 304 ft. from most easterly E line and 350 ft. S of roads, William King Sur. ....Drlg. 2,535 ft.

J. C. McFarland et al's No. 1 Willie Starr, center of S 40 acres of Starr 96-ac. tract, Charles Cooper Sur. .....Drlg. 3,380 ft.

Saturn Oil Co.'s No. 1 W. F. Smith, 330 ft. from E line and center of N and S lines of S 25 acres of W 50 acres of 100-ac. tract, J. Pineda Sur. .....T.D. 3,716 ft.; plugged back to 3,704 ft.; testing.

A. A. Trammell et al's No. 1 E. H. Hampton, 330 ft. from S and E line of S 60 acres of E 150 acres of 192-ac tract, William King Sur. .....Drlg. 2,700 ft.

L. E. Trout et al's No. 1 O. M. Victory, 330 ft. from S and E lines of 60-ac. lease, E. A. J. Evans Sur. ...Derrick.

Webster's No. 1 R. H. McClelland, 1,956 ft. E and 385 ft. S of NW cor. of 751-ac. tract, M. P. Del Torres Sur. .....Derrick.

VAN ZANDT COUNTY

Barton et al's No. 1 C. L. Hubbard, 600 ft. out of NE cor. of Hubbard 225-ac. tract, 3½ miles S of Canton, M. J. DeCadena Sur. .....S.D. 2,405 ft.

Kelly O. & G. Co.'s No. 1 Lemsford, center of Lemsford tract, John Conner Sur. .....S.D. 2,300 ft.

Pure Oil Co.'s No. 1 R. Clark, 910 ft. S of N line and 704 ft. W of E line of lease, Phillip Mason Sur. .....Coring 2,966 ft.

Pure Oil Co.'s No. 2 P. E. Neill, 329 ft. N of S line and 59 ft. E of W line of lease, John Walling Sur. .....Cmt. setting 2,932 ft.

Pure Oil Co.'s No. 2 Mrs. C. White, 250 ft. E of W line, 250 ft. S of N line, John Walling Sur. .....Derrick.

Pure Oil Co.'s No. 2, 200 ft. N of S line and 200 ft. E of W line of lease, John Walling Sur. .....Location.

Pure Oil Co.'s No. 4 R. E. Cade, 200 ft. N of S line and 225 ft. E of W line of lease, A. McPhail Sur. ...Swabbing.

Pure Oil Co.'s No. 4 J. J. Murphree, 692 ft. S of N line and 200 ft. E of W line of lease, John Walling Sur. .....Preparing to abnd 3,004 ft.

Pure Oil Co.'s No. 5 R. E. Cade, 225 ft. S of N line and 225 ft. E of W line of lease in A. McPhail Sur. .....Cmt. setting 2,696 ft.

Pure Oil Co.'s No. 9 A. R. Tunnell, 644 ft. N of S line and 250 ft. W of E line of lease, John Walling Sur. .....Rigging up.

Van Oil Association's No 1 Tankersley, 200 ft. from E and 1,000 ft. from S of farm, L. Landers Sur. .....Coring 2,850 ft.

WOOD COUNTY

Talko Oil Co.'s No. 1 G. T. Ross, B. L. Smith Sur. .....S.D. 2,670 ft.

Wood County Dev. Co.'s No. 1 Davis, approximately 180 ft. from S line of 160-ac. tract and 2½ miles S of Kantes in Sarah McDonald Sur. .....Moving in rig.

Increase in Oklahoma Crude Oil Output

Testing of Wells in the Oklahoma City Field Causes a 45,000-Bbl. Hike in State's Production. New Discoveries

By W. A. Spinney
Staff Correspondent, Oklahoma Fields

A 45,000-bbl. increase was reported in the daily average production of Oklahoma during the week ending April 9. The daily average production was estimated at 451,700 bbls. The Oklahoma City Field, which averaged 128,085 bbls. daily was largely responsible. Five new locations were announced in the Oklahoma City Field during the week compared to 14 the previous week. Work on the cellars and derricks is starting on all the locations, but it is expected that most of them will be shut down 58 days to line with the new proration orders, before drilling is started.

The Fish Pool in Seminole County reports another producer from the Wapanucka lime It is The Texas Company's No. 2 Eliza, SE cor. NW SE, Section 19-7-8, which produced 572 bbls. of oil in six hours from pay at 3,096-3,105 feet. Another test nearing completion is the Empire Oil & Refining Co.'s No. 3 Fish, NE cor. SW SE, Section 19-7-8, which reports a showing of oil from the Wapanucka at 3,032 feet and the first showing of oil and gas was found at 3,052 feet. It was drilling in the pay at 3,060 feet.

A Kay County Discovery

An interesting wildcat test in the northern part of Kay County found a showing of oil in what is believed to be the Simpson sand which is considered a new producing formation for that part of the county. The test, Harris & Haun's No. 1 Watson, SW cor. NW, Section 28-28-1w, found the Simpson sand at 3,618-37 feet, where a showing of oil appeared through 3,000 feet of water that was in the hole while it was drilling. The 5-inch casing was landed and cemented at 3,627 feet. The water in the hole was bailed out and oil rose 2,700 feet from midnight to 7 a.m. A showing of gas was reported. The operators plan to run tubing and make a production test of the oil showing.

The test is located about 3 miles south of the Braman Field, and east of the Blackwell Field. The majority of wells in these pools found oil in the Wilcox sand and the operators may drill this test to the Wilcox sand later. It is considered one of the outstanding wildcat wells completed this year in Oklahoma and if it proves to be a commercial well it will cause additional drilling in the adjoining territory.

Oil Companies Merge

Wirt Franklin, president of Wirt Franklin Petroleum Corp., announced acquisition of the Virginia Petroleum Co. and Cromwell-Franklin Oil Co. A special meeting of stockholders was held in Ardmore, Monday, April 4, when the reorganization or merger plans were considered.

It was stated that under the new plan the Cromwell-Franklin Oil Co. stockholders were to receive a total of 11,023 shares of preferred stock and 5,800 shares of common stock in the Wirt Franklin Petroleum Corp.

The Virginia Petroleum Co. it was stated would acquire the half interest owned by Wirt Franklin in all properties owned jointly by Cromwell-Franklin Oil Co. and Wirt Franklin. Wirt Franklin was to receive the entire capital stock of the Virginia Petroleum Co., which is a subsidiary of Wirt Franklin Petroleum Corp.

The Virginia Petroleum Co. is expected to transfer all of its assets to Wirt Franklin Petroleum Corp. and that company was to transfer to the Virginia Petroleum Co. stockholders 5,881 shares of preferred stock and 30,954 shares of common stock in Wirt Franklin Petroleum Corp.

The reorganization plan and transfer of assets was to be effective as of December 31, 1931, and all debts of Virginia Petroleum Co. and Cromwell-Franklin Oil Co. were to be assumed by the Wirt Franklin Petroleum Corp.

The new company's largest holdings are believed to be in the Oklahoma City Field where it has productive leases scattered throughout the field and considerable wildcat acreage is held in Oklahoma and in northern Cleveland County.

New Locations

New locations announced over the week end in the Oklahoma City Field include the following: Anderson-Kerr's No. 1 in the NE cor. NE SW, Section 15-11-3w, and No. 1 Gallagher, NE cor. SW NW SE, Section 22-11-3w; Murray-Stevens and others' No. 1 Harper-Turner, NE cor. NW SE, Section 22-11-3w; Ralph Day, Inc.'s No. 1 Leverich, SE cor. NW NE SE, Section 22-11-3w, and Anderson & Kerr's No. 1 Lippert, SW cor. NW SE, Section 22-11-3w.

The Wilcox sand trend in the southern part of the Oklahoma City Field was under discussion during the week when the Phillips Petroleum Co. and Shell Petroleum Corp.'s No. 1 Berg, NE cor. SW Section 26-11-3w, in the extreme south end of the field, landed the 7-inch casing at 6,421 feet after drilling to a total depth of 6,573 feet. The well is expected to define the trend of the Wilcox sand in a southeasterly and northwesterly direction across the southwest part of the field.

The first tests to take advantage of the new ruling of the Corporation Commission permitting tests to shut down for 58 days after erecting the derricks are Tom Slick Oil Co.'s Nos. 4 and 5 Long in Section 15-11-3w, before drilling.

Phillips Petroleum Co. and others' No. 1 Brittain, NW cor. NE SE Section 35-12-3w, in the extreme north end of the field, flowed 336 bbls. of oil in four hours on its second four-hour test. It apparently defines the field to the north in that area.

75,000-Bbl. Well

Another large well was tested during the week in the Oklahoma City Field, when Hall & Briscoe's No. 1 Stigall, in Block 18 of Central Addition, in the SW cor. SW SW SE Section 3-11-3w, in the north end of the field, flowed 4,431 bbls. of oil in 1 hour and 22 minutes. The gas was estimated at 45,000,000 feet a day and the oil at 75,000 bbls. a day. The hole is bottomed at 6,487 feet, with the 9-inch casing landed at 6,283 feet. The well was tested through a 6-inch choke. The first test of the well was on March 19, when it made 920 bbls. of oil in 15 minutes and was then shut in because the sand cut the connections.

Phillips Petroleum Co. and Indian Territory Illuminating Oil Co.'s No. 1 Kry, NE cor. NE NW Section 3-11-3w, flowed 2,483 bbls. of oil in an hour and a half. The gas was estimated at 23,000,000 feet a day. The total depth of the well is 6,480 feet with the 9-inch casing cemented at 6,313 feet. The well was produced through a 4-inch choke.

Morgan Petroleum Co.'s No. 1 Stout-Gibbons, SE cor. SE SW SE Section 34-12-3w, on the edge of the city limits, caught fire when the well was opened and gas blew a gate off the separator. The fire damaged the rig floor and nearby equipment before being brought under control.

Restraining Order

The Oklahoma Corporation Commission issued an order during the week forbidding the Wilcox Oil & Gas Co. and Titan Oil Co. from "taking, receiving or gathering, for the purpose of purchase or delivery, crude oil to be carried either by pipe line or rail, from any producer in the Oklahoma City Field, in excess of the allowable which any such producer may be entitled to produce and they are hereby further prohibited and restrained from delivering to any carrier, either pipe line or rail, its own production or any production received from others, in excess of such crude oil as may be legally and allowably produced in said field." The commission issued a general order some time ago forbidding production and marketing of oil in excess of fixed allowables and this is the second order issued on a petition of Ray M. Collins, state umpire, alleging the Wilcox company handled 699,356 bbls. of oil in excess of the total allowable of its own and connected wells between October 1 and February 29. It was estimated the total amount of oil handled during that period was 1,199,918 bbls.

It was recited in the petition of Ray M. Collins, the state umpire, that such an order is "necessary in the prevention of waste and in the enforcement of orders heretofore made by the commission, looking to ratable taking of crude oil as provided by the law, or based on circumstances and facts which have heretofore been shown to exist, and found by the commission to exist in the orders heretofore promulgated."

The new restraining order does not prevent the Wilcox company handling its own legally produced oil or that of any other compnay, but a warning is given purchasers and transporters that they must not accept illegally produced oil.

The order also provides that "all carriers of crude oil, either by pipe line or rail, connected with and serving the Oklahoma City Field, be and they are hereby prohibited and restrained from accepting for purchase or transportation any crude oil produced in the said Oklahoma City Field which may have been produced contrary to the terms heretofore promulgated by this commission, or of any order which may hereafter be promulgated by this commission.

"Any such carrier is hereby prohibited and restrained from accepting either for transportation or purchase, any oil produced in excess of that allowable which

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WILDCAT OPERATIONS IN OKLAHOMA

NORTHERN OKLAHOMA

ALFALFA COUNTY

Company, farm and location—	Remarks:
Smith Brothers' No. 1 Forbes, SE cor. NW NW Sec. 12-27-11w	S.D. 1,232 ft.
J. W. Bailey's No. 1 Acre, SW cor. NE Sec. 14-24-11w..	S.D. 5,502 ft.

BECKHAM COUNTY

Pattel Royalty's No. 1 Goose Tree, SW SE SW SE Sec. 32-10-23w	Rig.
Price-McFann's No. 1 Webster, C SW SW Sec. 34-8-26w..	T.D. 2,344 ft.; plugged back to 1,890-1,900 ft.; 1,500,000 ft. gas.
Mid-Continent's No. 1 Schaff, C NE SW Sec. 22-11-22w..	Waiting on cmt. to set 430 ft.
Mid-Texas Co.'s No. 1 Sidell, NE cor. SW SW Sec. 17-22-22w	S.D. 2,550 ft.
White et al's No. 1 Green, SW cor. Sec. 34-10-24w.....	S.D. 3,575 ft.

BLAINE COUNTY

Washoma Oil Co. et al's No. 1 Phillips, C NW SW Sec. 13-19-10w	S.D. 5,115 ft.

CADDO COUNTY

Abernathy & Brown's No. 2 Houston, Sec. 24-6-13w	S.D. 1,115 ft.

CHEROKEE COUNTY

La Piere et al's No. 1 Woods, C SE SE Sec. 27-17-21	S.D. 1,504 ft.

COAL COUNTY

Radial Oil Co.'s No. 1 McGraw, NE NW Sec. 2-1s-8	S.D. 1,450 ft.
Whitney et al's No. 1 Miller, SE NE Sec. 10-2-8.....	Show wtr. 1,155-60 ft.; drlg. 1,475 ft.

COMANCHE COUNTY

G. W. Stogner's No. 1 Doebel, C SW SW Sec. 3-3-9w.....	S.D. 1,450 ft.

CREEK COUNTY

R. F. Moore et al's No. 1 Gilliam, NE cor. SW NW, Sec. 17-17-8	S.O. 2,815-39 ft.
Miley Pet. Co.'s No. 1 Caldwell, NE Sec. 12-14-14w.....	Location.

GRADY COUNTY

Schoonmaker et al's No. 1 Station, NW cor. 35-4-6w.....	Rig.

GARFIELD COUNTY

E. L. Love et al's No. 1 White, SE cor. NW Sec. 9-24-6w..	S.D. 5,850 ft.

GARVIN COUNTY

Malarnee et al's No. 1 Phillips, NE SW SE Sec. 24-2-2w..	S.D. 4,830 ft.

GREER COUNTY

Dovell et al's No. 1 Capell, NW cor. Sec. 1-7-22w.....	5,000,000 ft. gas 1,455-65 ft.; T.D. 1,760 ft.
French's No. 1 Murphy, SW NW Sec. 23-7-21w	S.D. 1,645 ft.

HASKELL COUNTY

Ault et al's No. 1 Hall, NW SW SW Sec. 14-9-19.....	S.D. 2,000 ft.
Ault et al's No. 1 Hall, SE NW Sec. 25-19-9	S.D. 200 ft.

KAY COUNTY

Bluebaugh et al's No. 1 Indian, C NW NE Sec. 30-25-1...	S.D. 1,750 ft.
Harris & Haun's No. 1 Watson, SW NW Sec. 28-28-1w...	Drlg. 3,481 ft.
Lewis et al's No. 1 Harris, SE NW Sec. 14-25-1	Location.
Mummert Drlg. Co. et al's No. 1 Cormick, C NW SE Sec. 9-27-2	S.D. 3,693 ft.
Blackwell Oil Co.'s No. 1 Harshman, Sec. 2-26-1w.....	Rig on ground.

KIOWA COUNTY

Christian's No. 1 Jones, NE SE Sec. 8-7-18w	S.D. 880 ft.

LATIMER COUNTY

P. English's No. 1 Unknown, NW SE Sec. 16-6-19	S.D. 1,542 ft.

LINCOLN COUNTY

Hilton Phillips' No. 1 Phillips, SW NW, Sec. 2-14-3.....	Drlg. 4,567 ft.
Mote et al's No. 1 School Land, NW cor. Sec. 36-17-5....	Drlg. 1,735 ft.

OKLAHOMA COUNTY

Citizens Oil Co.'s No. 1 Sage Barber, NE cor. Sec. 21-11-3w	S.D. 1,200 ft.
L. C. Hivick's No. 1 Sunset Addition, NW SW NW Sec. 17-11-3w	S.D. 5,515 ft.

PAWNEE COUNTY

Rockstool's No. 1 Wylie, NW NE SW Sec. 6-20-5	S.D. 1,950 ft.

PITTSBURG COUNTY

Ruby Ann Oil Co.'s No. 1 George, CSL NW SE, Sec. 3-4-16	Drlg. 550 ft.
Tape Oil Co.'s No. 1 Fulton, SE Sec. 34-7-14	S.D. 1,700 ft.
J. Morrison's No. 1 Fowler, NE SE Sec. 13-7-17	Rig.

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Reno County Producing Area Extended

Important Showing of Shell-Olson Semiwildcat. Production in Kansas Remains Below 100,000 Bbls.

By W. A. Spinney
Staff Correspondent, Kansas Fields

An important extension to the producing area in the northeastern part of Reno County, Kansas, was found by the completion of the second gas well. The production west of Burrton was extended three-quarters of a mile by the Shell Petroleum Corp. and Olson Drilling Co.'s No. 1 Goering, C NE SW Section 26-23-4w, Reno County, which blew in for an estimated flow of 40,000,000 feet of gas a day from the chat at 3,237 feet. After cementing casing at 3,242 feet the well was drilled to a total depth of 3,291 feet. The original pool was opened by the Shell Petroleum Corp. and Continental Oil Co.'s No. 1 Blake, in Section 23-23-4w. It made 200 bbls. of oil a day and 16,000,000 feet of gas from the chat at 3,267-78 feet. Several other tests are drilling in the area.

The State's daily average production for the week ending April 9 was estimated at 97,500 bbls. a day, compared to 96,715 bbls. the previous week.

The Sharpe area in Rice County, located about 4 miles northeast of the Schurr Pool and where one well was completed by Cress and others' No. 1 Sharpe, SE cor. NE Section 13-20-10w, is to be developed. The Empire Oil & Refining Co. announced two new locations for the area during the week. The first is the east offset to the discovery well, in SW cor. NW Section 18-20-9w, where material has been moved in. The other is a southeast diagonal offset in the NW cor. SW Section 18-20-9w. The discovery well was completed about a year ago and found production in the Siliceous lime at 3,325-33 feet and pumped 1,079 bbls. of oil on a potential test and 100 bbls. of water. Development of the area has been slow because of the lack of a pipe line outlet.

Production was extended in the Ritz-Canton Pool, in McPherson County, by Twin Drilling Co.'s No. 1 Fletcher, SW cor. NW SE Section 16-19-1w, in the northeast part of the pool. Chat was found at 2,931 feet, at which depth it began spraying oil and showing gas at the rate of 1,000,000 feet a day. It was shut down to erect tankage. It extends production a quarter of a mile to the north in Canton area.

Shell Petroleum Corp.'s No. 1 Helstromin, Section 35-19-3w, in the new oil area in McPherson County, is estimated at 1,200 bbls. a day from the chat at 2,988-3,051 feet. The gas is estimated at 50,000,000 feet a day.

Another large producer was completed in the Stratman Pool, in Ellsworth County. J. R. Robertson & Hinkle's No. 2 Stratman, SW cor. SE NE Section 1-17-10w, swabbed 260 bbls. of oil in three hours from the Siliceous lime at 3,267-72 feet. It made 87 bbls. of oil the last hour without lowering the fluid in the hole. Oil rose within 100 feet of the top of the hole in 40 minutes after the pay was drilled. It is the second well on the 160 acres the operators own, which appears to be in the heart of the pool. It is the east offset to the No. 1 Stratman.

Ritz-Canton Potential

According to a report of the umpire, L. R. Pickrell, the potential production of the 131 wells in the Ritz-Canton-Decker area was 103,373 bbls. on March 1. The total pipe line shipments from the pool for the month of March were 387,569 bbls.

There is practically no change in the pipe line nominations of the purchasing companies and the daily outlet remains the same. Operators are permitted to produce 8 per cent of the potential production until such time as additional wells or change in the pipe line nominations necessitates a change.

The largest well in the field is the G. Dickey Oil Co.'s No. 1 Decker, in Section 35-19-2w, a chat producer with a potential of 3,675 bbls. a day. The largest Viola lime well in the field is Carey's No. 1 Holt, with a potential of 1,862 bbls. a day.

The southeastern part of the Ritz-Canton Field was extended by the completion of a Viola lime well. W. C. McBride, Inc., and others' No. 2 Lovett, C NE SW, Section 13-19-2w, found water in the chat at 2,913-3,007 feet and after being drilled deeper to the Viola lime at 3,399-3,410 feet it made 415 bbls. of oil in 10 hours. It was drilled deeper to 3,412 feet and, given a 20-quart shot, started flowing but because of cavings the flow was shut off. It will be cleaned out and completed.

Western Kingman County and Pratt County are believed to be due for considerable oil development. This is indicated by interest in those areas and by the several tests drilling in the vicinity.

Skelly Oil Co.'s No. 1 N. Miles, SE cor. Section 19-27-10w, is a new location and is the north offset to the discovery well of the same company. Two tests are now drilling in western Kingman County. One is the Skelly Oil Co.'s No. 1 Leishman, SE cor. SW Section 20-27-10w, northeast of the discovery well. It was drilling at 2,200 feet with rotary tools. The other test is J. R. McMurray and others' No. 1 Westherall, in Section 20-28-10w, which was drilling below 1,400 feet, after cleaning up a fishing job which has delayed the work.

In eastern Pratt County, about 4 miles east of the Miles Pool, Ninnescah Oil & Gas Co.'s No. 1 Hardesty, in C SE Section 28-27-11w, was a rig building.

Barton-Ellsworth Potential

According to L. R. Pickrell, umpire and state agent for the Public Service Commission, the central western part of Kansas has a potential production of 30,852 bbls. a day. The total pipe line shipments from the wells along the Barton-Ellsworth Arch were 105,760 bbls. from the area for the month of March. This includes several Silicious lime pools in Barton, Ellsworth, Rice, Rush and Stafford Counties.

The nominations of the purchasing companies for the month of April remain the same as in March. Producers in the Schurr, Sharpe and Isern Pools are authorized to continue to produce 15 per cent of the potential production daily.

Because of the reduction in nominations of purchasing companies in the Ellsworth area, and the addition of new producing wells during March, this area shows a considerable shortage as of April 1. The new order states in order that this accumulated shortage may be equalized, producers in the Heiken, Stoltenberg and Stratman areas are authorized, effective April 1, to produce 5 per cent of their potential production daily until the shortage is equalized, at which time producers will be authorized to produce the percentage allowed in relation to the potential production to the pipe line nominations. Producers in the remaining areas are authorized to continue producing their properties on the present schedule.

The following is a report of the potential production and pipe line shipments from wells and pools in the Barton-Ellsworth Arch area, for the month of March:

	Pot. prod. per day	P. L. sh'p'm. per mo.
Isern area, Sec. 12-20-11w:		
Derby Oil Co., No. 1 Bierscheidt	50	1,563
Hilligoss, No. 1 Isern	1,023	4,855
Davidson area, Sec. 4-16-11w:		
Prairie, No. 1 Davidson	150	Shut in
Heiken area, Sec. 12-27-10w:		
Slick, Pryor & Lockhart, No. 1 Heiken	1,182	4,543
Stoltenberg area, Sec. 22-16-10w:		
Derby Oil Co., No. 1 Stoltenberg	1,880	4,686
Gypsy Oil Co., No. 1 Stoltenberg	928	5,322
Stratman area, Sec. 1-17-10w:		
Alyward et al, No. 1 Stratman	2,492	
Alyward et al, No. 2 Stratman	1,918	
	4,410	11,715
Derby Oil Co., No. 1 Stratman	974	2,196
Robertson et al, No. 1 Stratman	1,717	5,498
Beyer area, Sec. 21-19-9w:		
Muth Bros., No. 1 Beyer	250	1,653
Ploog area, Sec. 33-18-9w:		
Tatlock et al, No. 1 Ploog	2,000	Shut in
Sharpe area, Sec. 13-20-10w:		
Hinkle et al, No. 1 Sharpe	450	4,421
Schurr area, Sec. 21-20-10w:		
Phillips Pet. Co., No. 1 Mezger	1,377	
Phillips Pet. Co., No. 2 Mezger	1,247	
	2,624	12,216
Prod. & Ref., No. 1 Thompson	689	
Prod. & Ref., No. 2 Thompson	1,620	
	2,309	10,728
Slick, Pryor & Lockhart, No. 1 Mezger	886	4,117
Slick, Pryor & Lockhart, No. 1 Schurr	742	3,442
Slick, Pryor & Lockhart, No. 2 Schurr	1,062	
Slick, Pryor & Lockhart, No. 3 Schurr	1,540	
	2,602	12,987
Vickers Pet. Co., No. 1 Binger	1,380	
Vickers Pet. Co., No. 2 Binger	347	
Vickers Pet. Co., No. 3 Binger	100	
	1,827	9,562
The Texas Co., No. 1 West Greenawalt area, Sec. 17-19-16w:	998	4,651
Boyle-Grossman et al, No. 1 Greenawalt	250	834
Richardson area, Sec. 36-22-12w:		
Midwest, No. 29 Allen	1,800	1,671
Midwest, No. 36 Richardson	1,800	Shut in
Total	30,852	105,760

In the south end of the Seeley Pool, in Greenwood County, Ward McGinnis' No. 1 Edwards, NE cor. NW NE Section 33-23-11, is estimated to be a 200-bbl. well after a 110-quart shot from the Bartlesville sand at 1,956-89 feet. It was being cleaned out. Following the completion of the well, the same operator announced two new locations. No. 2 Edwards will be one location south of the No. 1 Edwards in the SE cor. NW NE Section 33-23-11, and No. 3 Edwards, in the NW cor. NE NE Section 33-23-11. Arrangements are being made to drill both tests at the same time.

Same operators' No. 1 Beal, SE cor. SW Section 28-23-11, found a small showing of oil in sand at 1,925-68 feet and found a hole full of water at 2,048 feet where it is being abandoned.

Harwood Oil Co.'s No. 2 Beal, SW cor.

(Continued on Page 45)

WILDCAT OPERATIONS IN KANSAS

(Descriptions are East unless marked otherwise)

BARTON COUNTY

Company, farm and location— Remarks:

Skelton Oil Co.'s No. 1 Ott, C SE SE, Sec. 16-19-14w....S.G. 3,410 ft.

DICKINSON COUNTY

Severe et al's No. 1 Lavengood, NE SW Sec. 13-13-2.....S.D. 4,752 ft.

EDWARDS COUNTY

Mid-Kansas O. & G. Co.'s No. 1 Converse, SW NE NE Sec. 30-24-18w .....Drlg. 465 ft.

ELSWORTH COUNTY

R. Gear et al's No. 1 Sanberth, C SW SE Sec. 29-16-9w...S.D. 50 ft.

Alyward et al's No. 1 Stratman, SE NW SE, Sec. 1-17-10w .....Siliceous 3,255-71 ft.; 117 bbls. 3 hrs. shut in; estimated 2,000 bbls.; no pipe line connections.

Aladin Pet.'s No. 1 Stoddenberg, C SW Sec. 22-16-10w....Siliceous lime 3,232-47 ft.; estimated 1,500 bbls. a day; shut in.

FINNEY COUNTY

National Ref. Co.'s No. 1 Wells, C SW Sec. 13-23-30w...Drlg. 4,280 ft.

HARVEY COUNTY

D. R Louck's No. 1 Regier, SW SE NW Sec. 9-22-3w....Rig.

J. Liggett et al's No. 1 Vessell, NE SW, Sec. 3-23-3w..Location.

Liggett et al's No. 1 Davis, SW SE NE Sec. 7-24-1.....S.D. 2,500 ft.

KINGMAN COUNTY

Panhandle Drlg. Co.'s No. 1 Wetheral, C SE NW SW Sec. 20-28-10w .....Fishing 1,170 ft.

McPHERSON COUNTY

Detrich et al's No. 1 Sinclair, SE SW, Sec. 25-19-1w....Spudding.

MORTON COUNTY

Hydraulic Oil Co.'s No. 1 State Land, NW SE Sec. 22-34-43w .....T.D. 3,640 ft.; temp. abnd.

MORRIS COUNTY

Kostle-Moseley & Hatfield's No. 1 Furney, NE SE Section 18-16-8 .....Spud; S.D.

Urschel et al's No. 1 Berauch, NW SE NW Sec. 10-17-7..S.D. 915 ft.

Hankerson et al's No. 1 Cessman, SW SE Sec. 24-16-8...S.D. 2,625 ft.

NORTON COUNTY

Richards et al's No. 1 Colby, Sec. 17-4-21w.....Rig.

OSAGE COUNTY

Briggs & Smith's No. 1 Wood, SE NW Sec. 21-14-15.....S.O. 2,190-2,209 ft.; S.D.

PHILLIPS COUNTY

Hall et al's No. 1 Donaldson, C NE NE, Sec. 25-5-18w..Rig.

PRATT COUNTY

Ninnescah O. & G. Co.'s No. 1 Hardesty, SW SE SE, Sec. 28-27-11w .....Rig on ground.

RAWLINS COUNTY

J. G. Durham et al's No. 1 Weaver, SE cor. Sec. 3-2-35w..S.D. 3,925 ft.

RENO COUNTY

Martin et al's No. 1 Yadu, C NW NW, Sec. 15-24-5w....Location.

Jarvis & Wright's No. 1 Rainbow, NW SE Sec. 33-22-7w..Rig.

RICE COUNTY

J. Liggett et al's No. 1 Thodel, C NW NW, Sec. 11-21-7w.S.D. 50 ft.

Gypsy Oil Co.'s No. 1 Steckel, C NE NW, Sec. 31-19-10w.Sand 3,299-3,324 ft; S.O; S.D.

RUSSELL COUNTY

J. Brennan's No. 1 Waly, CNL E½ NW Sec. 29-13-11w...Rig.

T. Palmer et al's No. 1 Pasek, C SE Sec. 3-14-11w.....Sil. 3,385-3,427 ft; abd.

RUSH COUNTY

Skelton et al's No. 1 Brock-Hartman, SW SE NE Sec. 4-18-16w .....S.D. 50 ft.

SALINE COUNTY

Twin Mounds Oil Co.'s No. 1 Weis, C W½ NE NW Sec. 20-13-4w .....T.D. 2,840 ft.; U.R. 6¼-in. csg.; S.G.

SHERIDAN COUNTY

Flo et al's No. 1 Shoemaker, SE SW Sec. 27-7-26w.....Drlg. 4,505 ft.

STEVENS COUNTY

Argus Prod.'s No. 3 Christopher, C NE Sec. 10-33-39w....S.D. 5,531 ft.

SUMNER COUNTY

Trees Oil Co. and Shell's No. 1 Springate, NE SE SW Sec. 6-34-3 .....Fishing 2,320 ft.

Caddo Parish Gas Field Is Extended

Possible New Producing Area in Sabine Parish. Oil Producer in Zwolle Chalk Rock Field. More Mississippi Gas Wells

By J. R. Crumpton
Staff Correspondent, Louisiana-Arkansas

SHREVEPORT, La., Apr. 11.—The developments in this division as revealed by the completions during the past week were all anticipated by the progress of the wells on test during the week before. A total of six completions was reported, resulting in four gas wells, one oil well and one dry hole.

As predicted last week, the Louana Oil & Gas Co.'s No. 1 Hammock, Section 32-19-16, near Blanchard in Caddo Parish, added 1½ miles to the proven area of a new field opened up more than one year ago. The new gasser gauged 14,000,000 feet, carrying 410 gallons of gasoline per 1,000,000 feet from a total depth of 2,763 feet. The rock pressure registered 1,150 pounds. The extension is located on a large block of acreage adjoining on the west the Belchic & Laskey holdings, original discoverers of the new gas area. The latter operators, operating as the Pyramid Oil & Gas Co., are rigging up to drill No. 2 Breard, Section 9-18-16. The Louana Oil & Gas Co., a new concern organized to develop this block, is headed by W. E. Hall, pioneer operator of North Louisiana, Arkansas and East Texas, and discoverer of the Carterville Field in North Bossier Parish. The United Gas Public Service Co. made the gasoline content test, and took the gauge of the new well. Other wells in this vicinity are averaging around 600 gallons per 1,000,000 feet of gas, and it is practically assured that the new well will develop this content after being allowed to flow for several days.

Sabine Parish

In northern Sabine Parish, Frank Foster, Inc., officially gauged No. 1 Stevens, Section 20-9-11, with a flow of 13,379,000 feet of gas from a total depth of 3,358 feet. The paleontology on the well reveals that the gas is coming from the Fredericksburg formation of the lower Cretaceous instead of from the Washita as first believed. The Langbridge Oil Co.'s No. 1 Stevens, Section 17-9-11, about 1 mile northeast of the new gasser, is a 35-bbl. flowing oil well and the discovery well of this area. The pay in this well is coming from 3 feet of sand in the Washita formation from 3,363-66 feet. In an effort to increase production in the Langbridge well, it was drilled to a total depth of 3,626 feet, encountering 15 feet of dry sand in the Fredericksburg, the top of which was at 3,492 feet with the base at 3,507 feet. As the surface elevation on the discovery oil well is 313 feet, the subsea depth of the Fredericksburg checks at 3,179 feet. The Foster well encountered this formation at 3,348 feet, with a surface elevation of 269 feet, resulting in a subsea depth of 3,079 feet for the top of the Fredericksburg, or 100 feet higher than encountered in the Langbridge test. With the above results already developed in the two wells completed in the new area, an oil well from sand in the Washita and a good gas well from the top of the Fredericksburg, both in the lower Cretaceous, the outlook is bright for a new producing area, the consistency and potential of which may exceed any field yet opened in North Louisiana. The Foster gas well tested a gasoline content of 215 gallons per 1,000,000 feet.

Zwolle Field

The Zwolle chalk rock field of Sabine Parish furnished the only oil well in the division and also reported the one dry hole. Baird & Stone's No. 1 Quayhaglen, Section 11-7-11, on the eastern flank, gauged 125 bbls. daily from 2,535 feet. In Section 13-7-11, C. H. Tuttle's No. 1 Travis was dry and abandoned at 2,595 feet. Several other tests in the Zwolle Field failed to obtain encouraging results on test during the past week. Baird Brothers' No. 1 Petty, Section 11-7-11, tested dry at 2,672 feet after drilling plug from 6-inch casing set at 2,370 feet. Zeke Lohman's No. 1 McCormick, Section 2-7-11, tested dry at 2,455 feet and is arranging to test at 2,680 feet. East of production, H. W. Perritt's No. 1 Brown Lumber Co., Section 6-7-10, bailed dry at 2,491 feet and at 2,618 feet. The test is now shut down waiting for orders. This operator has assembled a good block of acreage, some of which extends over into Natchitoches Parish, and has made a location to drill No. 1 Cook in Section 3-8-9. The Root Refining Co. which took over T. M. LeGrand's No. 1 Peterson, Section 34-7-11, tested dry at 2,495 and 2,547 feet and the test is drilling at 2,750 feet without yet encountering a break in the chalk. This well is a semi-wildcat located on a block of 600 acres 3 miles west of Zwolle Townsite production. Rowe and others in Section 13-

(Continued on Page 44)

WILDCAT OPERATIONS IN LOUISIANA-ARKANSAS

(Rotary operations unless otherwise designated)

NORTH LOUISIANA

AVOYELLES PARISH

Company, farm and location—	Remarks:
Stauffer & Eshleman's No. 1 Caruth, Sec. 40-1n-7e	Derrick.

BOSSIER PARISH

Dr. W. N. Hankin's No. 1 Newell, 300 ft. S and W, NE cor., Sec. 12-19-11	S.D. 1,890 ft.

CADDO PARISH

Louana O. & G. Co.'s No. 1 Hammock, Sec. 32-19-6, 660 ft. N and W, SE cor.	Testing 2,763 ft.
Pyramid O. & G. Co.'s No. 2 Breard, Sec. 9-8-16, 660 ft. S, 1,980 ft. W, NE cor. Sec.	Rigging up.

CALDWELL PARISH

Carter Bell's No. 1 Taylor, 150 ft. S, 150 ft. E, NW cor. NE SE, Sec. 17-14-4	Drlg. 2,204 ft.
Hudson et al's No. 1 Burton, Sec. 35-12-2e	S.D. 2,950 ft.

CATAHOULA PARISH

National Drlg. Co.'s No. 1 Marsh McMiller, 70 ft. N, 100 ft. W, C, Sec. 26-9-6	T.A. 3,097 ft.

DE SOTO PARISH

E. T. Oakes' No. 1 R. H. Bryant et al, 300 ft. N and W, SE cor. NE NW, Sec. 30-13-15	S.D. 3,370 ft.
A. R. Smith's No. 1 Horn, Sec. 16-12-16, NE cor. Sec.	Rigged up and S.D.
DeSoto Development Co.'s No. 1 Nickey, Sec. 7-13-12	Derrick.
Walters-Nicholson, tr.'s No. 1 Jim Guy, Sec. 3-11-13	Arranging to set 8-in; T.D. 1,675 ft.

GRANT PARISH

Security Pet. Corp.'s No. 1 Swope est., Sec. 16-9-1e, 1,698 ft. N, 320 ft. E, SW cor. Sec.	Derrick.

MOREHOUSE PARISH

United Gas Public Service Co.'s No. 2 Sandidge, Sec. 11-20n-4e, 656 ft. S, 1,322 ft. W. NE cor. NW	S.D. 2,133 ft.

NATCHITOCHES PARISH

W. M. Coates' No. 1 Ross Olive, Sec. 10-9-10, 660 ft. S and E from cen. of Sec.	Derrick.
Dr. H. S. Gerson's No. 1 Smith, Sec. 11-10-3, 2,000 ft. N, NE cor. of irregular Sec. 10, in Sec. 11	Drlg. 1,000 ft.
R. A. Keaton's No. 1 Stephens, Sec. 25-10-6, 320 ft. N and W, SE cor. NW NW	S.D. 178 ft.
H. W. Perritt's No. 2 Brown Lbr. Co., Sec. 30-7-9, 300 ft. S and E, NW cor. NW SE	Location abd.

OUACHITA PARISH

Wilson & Mitchell's No. 1 Williams, Sec. 5-16-1,e 330 ft. E, 240 ft. S, NW cor. SW SE	Tested dry 2,677 ft; coring 2,680 ft.

RED RIVER PARISH

La. Oil Dev. Co.'s No. 1 La. Delta Pecan Co., 2,950 ft. S, 300 ft. E, NW cor., Sec. 27-13-11	Spudded and S.D. 50 ft.

RICHLAND PARISH

National Gas Co.'s No. 1 Singletary, 1,980 ft. N, 660 ft. W, SE cor., Sec. 20-18n-7e	S.D. 2,515 ft.

SABINE PARISH

Baird & Hunter's No. 1 Petty, Sec. 11-7-11	Tested dry 2,672 ft; W.O.
Beene et al's No. 1 Ezernack, Sec. 2-7-13, 1,070 ft. S, 250 ft. W, NE cor.	Set 6-in. 2,055 ft.
Baird & Stone's No. 1 Quayhaglen, Sec. 11-7-11	Completed pumping 125 bbls. at 2,535 ft.
R. W. Boulding's No. 1 Williams, Sec. 17-7-10, 200 ft. S and E, NW cor. SW NE	Derrick.
Broderick & Calvert's No. 1 Costello, Sec. 2-7-14, 375 ft. S, 150 ft. W, NE cor. SE NW	Set 10-in. 102 ft; drlg. 150 ft.
Coates Pet. Co.'s No. 1-B S. S. Martinez, Sec. 3-7-13, 330 ft. S and W, NE cor. SE NE	Set 10-in. 105 ft; drlg. 1,410 ft.
W. M. Coates' No. 1 Stille, 330 ft. N, 660 ft. W, SE cor., Sec. 35-8-13	Derrick.
Craig et al's No. 1 Travis, Sec. 13-7-11, 200 ft. S and E, NW cor. SE NW	Derrick.
B. A. Ferrell's No. 1 Haley, Sec. 6-7-12, 300 ft. S and E, NW cor. NW SW	Set 10-in. 103 ft.
Frank Foster, Inc.'s No. 1 Stephens, Sec. 20-9-11, 330 ft. S and W, NE cor. NW NW	Completed for 13,379,000 ft. gas at 3,358 ft.

(Continued on Page 78)

LOUISIANA-ARKANSAS PROVEN AREAS

NORTH LOUISIANA

CADDO PARISH—PINE ISLAND

Company, farm and location—	Remarks:
Calatex O. & G. Co.'s No. 1 Scott, Sec. 5-16-16, 1,320 ft. E, 300 ft. N, SW cor.	Rigging up.
Simplex Oil Co.'s No. 1 Youree-Glassell, 500 ft. N and E, C, Sec. 13-20-15	S.D. 2,275 ft.

OUACHITA PARISH

Carbon Cons.' No. 7 Guthrie, Sec. 50-20n-4e, 5,263 ft. N, 7,475 ft. W of cors. of Secs. 25, 26 and 49, in Sec. 50	Location.

SABINE PARISH—ZWOLLE

O. J. Baird's No. 2 Duggan, Sec. 14-7-11, 200 ft. S and E from cen. Sec.	Set 10-in. 100 ft.; fishing for D.S. 1,330 ft.
Coates Pet. Co.'s No. 2 McNeely, Sec. 14-7-11, 250 ft. S and W, NE cor. NW NE	Derrick abd.
Hawkins & Antoon's No. 1 Newton, Sec. 1-7-11	W.O.S.R. 2,609 ft.
Hudson & Bird's No. 1 Walden, 480 ft. N, 300 ft. E, SW cor. SW NE, Sec. 26-8-11	S.D. 2,454 ft.
Zeke Lohman's No. 1 McCormick, 660 ft. E, 330 ft. N, SW cor. NE SW, Sec. 2-7-11	Testing 2,680 ft.
Loring Oil Co.'s No. 18 Bowman-Hicks, 1,280 ft. S, 275 ft. E, NW cor. SW NW, Sec. 15-7-12	Arranging to shoot stuck D.S. 4,850 ft.
Ben Merritt, tr.'s No. 2 Byrd, Sec. 1-7-11	S.D; W.O. 2,579 ft.
Pelican Nat. Gas Co.'s No. 11 La. Long Leaf Lbr. Co., Sec. 10-7-11, 330 ft. N and W, SE cor. NE NW	W.O.S.R. 2,592 ft.
Sabine Prod. Co.'s No. 3 Pearce, Sec. 10-7-11, 330 ft. S and E, NW cor. SE NW	Set 10-in. 110 ft; set 6-in. 2,275 ft.
Stovall Drlg. Co.'s No. 3 Nulton, 330 ft. N and W, SE cor. SE NE, Sec. 2-7-13	Location.

UNION PARISH

Southern Carbon Co.'s No. 58 fee, Sec. 17-20-4e, 1,557 ft. W, 1,220 ft. S, NE cor. Sec.	Set 6-in. 2,120 ft.

ARKANSAS

UNION COUNTY—EL DORADO

Lion O. & R. Co.'s No. 9-A G. P. Hayes, 242 ft. S, 246 ft. W, NE cor. Lot 5, NE, Sec. 4-16-15	S.D. 7,255 ft.
Southern Prod. Co.'s No. 1 Wingfield, NE cor. SE NW, Sec. 16-19-15	Drlg. red beds 3,081 ft.

UNION COUNTY—URBANA

Marine Oil Co.'s No. 1 Winn est., 330 ft. S and E, NE cor. S½ NW, Sec. 11-18-13	T.A. 3,586 ft.
Marine Oil Co.'s No. 2-E Thompson, 330 ft. N, 330 ft. E, SW cor. NE NE, Sec. 10-18-13	Location.
Wilson & Chapman's No. 1-B Hadley, Sec. 3-18-13, 330 ft. S and W, NE cor. SE NW	T.A. 3,545 ft.
Wilson & Chapman's No. 2 Emily King, Sec. 3-18-13, 150 ft. S, 150 ft. E, NW cor. NE NE	Rigging up.

EAST TEXAS

PANOLA COUNTY

Daisy O. & G. Co.'s No. 1 Rucks, John Palmer Sur.	T.A. 2,194 ft.
Nat. Gas Prod. Co.'s No. 1 Cadenhead, 5,219 ft. N, 5,620 ft. E, SW cor. B. C. Jordan Sur.	Set 13⅜-in. 40 ft.
United Prod. Corp.'s No. 17 Steele, 1,320 ft. N, 660 ft. W, SE cor. C. D. Steele Isc., in B. C. Jordan Sur.	Location.

MISSISSIPPI

HINDS COUNTY

James Alexander, tr.'s No. 1 Pullen, Sec. 26-6n-1e, C NW NE	Set 10-in. 166 ft; drlg. 1,280 ft.
Belhaven College's No. 1 fee, Sec. 35-6n-1e, 350 ft. E, 210 ft. S, NW cor. SE NW	Set 6-in. 2,390 ft.
McGuire et al's No. 1 Spring Lake, Sec. 11-5n-1e, 250 ft. N, 450 ft. W, from center of Sec.	Set 10-in. 752 ft; T.D. 1,075 ft.

RANKIN COUNTY

Meredith & Smith's No. 2 Strawder, Sec. 12-5n-1e, 2,532 ft. W, 300 ft. N, SE cor. NE	Drlg. 150 ft.
Muse & Muse's No. 1 Pate, Sec. 12-5n-1e, 220 ft. N, 1,150 ft. W SE cor.	Set 10-in. 100 ft; drlg. 1,385 ft.

(Continued on Page 49)

1. Early day test installation of Pabco covering—applied longitudinally to hot oil line with wooden battens.

2. Test installation of Pabco pipe covering applied on hot oil line in 1915.

3. Section of covering cut from hot oil line—pipe and covering in perfect condition.

Service records prove PABCO EFFICIENCY

In 1915 The Paraffine Companies, Inc. designed a special Pabco fabric for wrapping hot oil line pipe. No expense was spared. The new material was far better than any ever used before.

Test sections were installed on hot oil lines in the San Joaquin Valley, the birthplace of the whole idea of underground pipe protection. The soils were probably as corrosive as any ever met with in practice.

The covering was applied longitudinally and held tightly to the pipe by battens—the standard practice of that day. (See illustrations).

In spite of the extreme soil conditions and the heat from the oil, every subsequent examination has shown the pipe to be in good condition.

Later installations of a special felt base covering, on the same formula, were made on many miles of line pipe in the severely corrosive soil of the Tulare Lake bed and other San Joaquin Valley locations. Nine years of service under these extremely difficult conditions give further proof of the efficiency of the Pabco Method of Pipe Protection.

At your request the advantages of the Pabco Method for your installations, and how it will save you many dollars on installation and maintenance, will be explained by one of our engineering representatives.

PABCO PRIMER

No. 3972 PABCO INHIBITIVE PRIMER has high resistance to soil corrosion. Prevents skips in the priming since its rich maroon color readily reveals dark, unprotected spots. Far more weather resisting than ordinary bituminous primers. Fully protects unwrapped ends of pipe, allowing long yard storage with minimum risk.

THE PARAFFINE COMPANIES, INC.

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Manufacturers of Pabco Linoleum, Pabco Multi-Service Paints, Varnishes, Lacquers and Enamels, Pabco Flamite, Pabco Waterproofing Paints and Compounds, Mastipave, Pabco 10, 15 and 20 Year Roofs, Malthoid Membrane Dampcourse, Pabcobond and Other Products

PABCO PRODUCTS

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PABCO Method of PIPE PROTECTION

Looks Like New Pool in Duval County

Seacord & Putnam Have an Important Discovery. Interesting Development Work Covering Wide Southwest Texas Territory

By B. D. Stevenson
Staff Correspondent, Southwest Texas Fields

SAN ANTONIO, Tex., Apr. 11.—While the close of the week again sees a number of important wildcat tests that have looked like producers not fully tested, it seems evident that a new pool has been opened north of the Government Wells Pool in Duval County by Seacord & Putnam in the SW NW NW of Survey 44, with their No. 1 Johnson, reported to be a 10,000,000-foot gas well, total depth 1,474 feet. Cole & Mosely's No. 1 Pierce, in Caldwell County, is being estimated at 500 bbls. provided they get the drill stem out of the hole and can get the well properly completed.

Heard & Heard's No. 1 Goodrich, in southern Starr County, is not yet fully completed, as it has no provision for disposing of the production, but it is evidently a good well, and opens a pool.

South of the Government Wells Pool, Smith & Capps are testing; Jacob, Buzxini & Pickett are bailing in McMullen County, and Camp and the Stanolind Oil & Gas Co. set casing and is waiting on cement in No. 1 King, in Nueces County.

In the proven fields, Humble Oil & Refining Co. completed No. 4-C Sue Denman in the Darst Creek Field, Guadalupe County, at 2,542 feet, the well making 25 bbls. an hour. Incidentally it closed considerable of the gap between the field on the northeast and the extension on the southwest making it look more as though it will be all one field.

Humble Oil & Refining Co. completed No. 3 Paul White in the north end of the extension to the Government Wells Field, in Duval County, extending production about 700 feet to the north in the direction of the original pool.

In Milam County, Frank A. Yeager put No. 1 L. Hoes on the pump and made a 6-bbl. well out of it, extending the Rockdale-Minerva Pool a half mile or more to the southwest. Total depth 1,680 feet.

Of two other completions in proven areas, one was in the new shallow pool in Starr County and the other O. W. Killam's No. 5 Medina in the Escobas Pool, both of them average wells for that field. Other than these all the producers completed extended the pools, and all the big news of the week centers around wildcat tests that are in process of being tamed into producers.

Balcones Fault Zone

Cole & Mosely's No. 1 Pierce in Caldwell County which was taken over by Bob Rose and drilled to its present depth, has made considerable oil, the speculative element remaining being that the drill stem is stuck in the hole and it is producing from the Austin chalk which has furnished some fairly good wells in Southwest Texas, but no importnt pools. No. 1 Pierce flowed for a few days through the mud and ran out onto the ground. About 1,000 bbls. was picked up and put in steel storage and of course much oil was lost. Casing is being run in over the drill stem to wash the hole out and loosen up the drill stem preparatory to completing the well.

Cranfill & Reynolds are starting to complete Meyers Exploration Co.'s No. 1 Walker, which has been standing at 100 feet and which is about 1 mile northeast of No. 1 Pierce. It is supposed to be located with reference to the fault about as is No. 1 Pierce. The No. 1 Pierce has a total depth of 2,114 feet and is about 50 feet in the chalk. If No. 1 Pierce opens a pool of importance it will undoubtedly be parallel to the Luling Field on the northwest and the Bruner or Salt Flats Field on the southeast and about 2½ to 3 miles from either.

The showing in No. 1 Pierce has been sufficient to start some development work in the district. M. O. Rayor, who drilled on the Dunlop tract a half mile southwest of the No. 1 Pierce and got a small well in the chalk at about the same depth as the No. 1 Pierce, is reported planning to start a test northeast of the No. 1 Walker which has been taken over at 160 feet by Cranfill & Reynolds. One or two other tests to the northeast were being shaped up over the week-end.

Duval County Tests

From the Charco Redondo Pool, in southern Zapata County, discovered many years ago, production has progressed to the north along the Reynosa Escarpment through the Mirando Pool and diagonally across Duval County. Many geologists have pointed out the foldings in the Laredo district with the structures running generally north and south and tending to the northeast in northern Webb and Duval.

This trend theory has been responsible for finding a number of new spots in the Laredo territory and on this theory Seacord & Putnam drilled No. 1 Johnson in Survey 44 which has been completed at 1,574 feet for 10,000,000 feet of gas. It is located about 3 miles northeast of the Government Wells Pool. Excepting some wells in the Carolina-Texas Field the deepest production in the Reynosa Escarpment region is 2,350 feet in the Government Wells Pool and extension pool, West Cole Pool and Henne-Winch-Fariss Pool. Other pools are shallower.

These chains of pools have produced a total of about 32,000,000 bbls. of oil at very low drilling costs because they are shallow. The Seacord & Putnam test brings the chain of pools to within 9 miles of the north line of Duval County.

There is a gap of about 1 mile between the Government Wells Pool and the extension pool on the south, and 2 miles farther southwest is Smith & Capps' No. 1 Duval County Ranch Co., which at 2,355 feet is 5 feet in a formation saturated with oil, and with casing set and waiting to test.

From there it is 11 miles south to the north end of the Kohler Field but Camp has spudded in on No. 1 Weil, 1½ miles south of the Smith & Capps' test, and Hynes & Nessly will spud in a test this week in the south central part of Survey 196, a little to the northwest of a straight line from the Kohler Field to the Smith & Capps well, and Jimmie Hicks is about to spud in on a test a mile south of Hynes & Nessly's test.

Hence the north end of the Reynosa Escarpment area with one gas pool proven, and another possible, within a few days, and seveal important wildcat tests is due to be the center of considerable interest. Nine miles due north of the Seacord & Putnam well and within a few hundred feet of the north line of the county in Survey 122, Trinity Drillers are starting a test on acreage blocked by Earl Frates. It is probably located on a line of folding to the northwest of that of the Seacord & Putnam well.

Joe Bruner Gets a Well

Joe Bruner's No. 1 Malone at the south end of the Bruner or Salt Flats Field in Caldwell County is putting about 20 bbls. a day into the tanks from 2,788 feet in the top of the Edwards lime but with the oil presumably coming from the Austin chalk. The Georgetown lime showed considerable saturation of oil, more, it is claimed, than normally. Bruner is considering shooting the Georgetown and also considering deepening it into the Edwards. The test was drilled on the theory that there is a cross fault between it and the field though it is only about one location from nearest production.

Operators have been working for some months on a line about 5 miles to the east of the Salt Flats Field. The Eiser test on the Wells ranch drilled a few weeks ago was responsible for part of it. The Humble, Shell and other companies have bought considerable acreage in that district lately.

George Sullivan and Shell Petroleum Corp. are about to spud in on a test on the Plainsoll farm in the W. W. Dennis Survey, near the railroad track about 5 miles east of Luling and about 6 miles northeast of where Empire Gas & Fuel Co. got an oil well on the Norwood farm in Gonzales County a couple of years ago that produced quite a volume of oil for some months but was finally abandoned. The new test is along the same

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WILDCAT OPERATIONS IN SOUTHWEST TEXAS

Week Ending April 9

ATASCOSA COUNTY

Company, farm and location—Remarks:

American Central Oil Co.'s No. 2 Mary McConnell, 150 ft. W of E line, 300 ft. S of No. 1, Blk. 138, W. C. M. Baker Sur., 3 miles W and 6 miles S from Somerset..T.D. 1,660 ft.; standing.

Glen Mathis' No. 2 Mrs. C. Martin, 100 ft. SE of No. 1...T.D. 2,980 ft.; preparing to resume.

BASTROP COUNTY

L. L. Champion's No. 1 Owens, 500 ft. to SE line, 600 ft. to SW line of 628-ac. tract, Isaac Cosner Sur.....Location.

E. R. Marts and W. J. Beavens' No. 1 R. L. Carter, 450 ft. from NE line, 150 ft. from NW line of 100-ac. tract in George J. Glasscock Sur. .....T.D. 1,200 ft.; drlg.

Sun Oil Co.-Humble Oil & Ref. Co.'s No. 1 Powers, 400 ft. of N and E lines of Blk. 197, Bastrop town tracts..T.D. 4,139 ft.; abnd.

BEE COUNTY

Alexander et al's No. 1 McFall, 3 miles S Skidmore...T.D. 2,100 ft.; abnd.

Humble O. & R. Co.'s No. 1 Laura Thompson, 6,366 ft. from N line, 15,100 ft. from W line of tract in Garrett Roache Sur., S part of county .....T.D. 5,310 ft.; getting in fuel.

J. L. Mauldin's No. 1 Kimball, 300 ft. NE of Grayburg Oil Co.'s No. 1-A Kimball in S. Winship Sur. .....Location.

Texas Gulf Producing Co.'s No. 1 Webb Hearn, 1,000 ft. N, 43 degrees E, thence 300 ft. NW at right angles from Hurlburt's No. 1 Wood in P. T. Irrigation Co. Sur. .....Location.

BELL COUNTY

J. W. Riley's No. 1 W. S. Chaffin, in M. Griffin Sur. ....T.D. 450 ft.; S.D.

Jas. Scroggin's No. 2 Warrick, Ingram Sur. .....T.D. 1,432 ft.; fishing.

BEXAR COUNTY

Amsden-Ingersoll-Miller's No. 1 Strumberg, 450 ft. to W line, 1,020 ft. to N line of tract, 12 miles SW of San Antonio .....T.D. 810 ft.; S.D.

Eckert et al's No. 1 Edwards, 150 ft. to N and W lines of farm in Martinez Sur. .....T.D. 1,490 ft.; standing.

Callahan Final Oil Co.'s No. 1 B. H. Buck, 900 ft. to E line, 3,200 ft. to S line of farm, in J. M. McGamley Sur. .....T.D. 650 ft.; abnd.

Dr. Ewell Neil's No. 1 J. Watson, 500 ft. from W line, 1,700 ft. from S line of B. Martinez Sur. .....T.D. 2,495 ft.; in Edwards, dry.

Schneider, Rees et al's No. 2 Claussen, 12 miles NE of San Antonio .....T.D. 1,330 ft.; S.D.

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SOUTHWEST TEXAS PROVEN AREAS

Week Ending April 9

COSDEN POOL—BEE COUNTY

Company, farm and location—Remarks:

Henderson Coquat's No. 1 Leroy Roberts, 300 ft. from W line of lease, 300 ft. N of NE cor. of Gremmel tract .....Location.

NORMANN POOL—BEE COUNTY

Gulf Coast Oil Co.'s No. 1 Hicks, 300 ft. S of Nichols Oil Co.'s No. 1 Hicks .....Rigging up.

PETTUS POOL—BEE COUNTY

Henderson Coquat's No. 2 Mauldin, 647 ft. to S line, 150 ft. to W line .....T.D. 3,886 ft.; testing sand.

United Prod. Co.'s No. 40 Ray, 2,990 ft. SE along the SW line of T. Thomas Hanson Sur. from SW cor. thence 2,346 ft. NE at right angles .....T.D. 1,352 ft.; drlg.

United Prod. Co.'s No. 41 Ray, in Geo. A. Kerr Sur., 660 ft. NE of No. 33 Ray and 660 ft. SW of No. 31 Ray .....T.D. 2,590 ft.; drlg.

COOKSEY POOL—BEXAR COUNTY

Chiquita Oil Co.'s No. 3 Cooksey, 480 ft. from E line, 330 ft. from S line of tr. in J. W. Rialls Sur. .....Location.

Chiquita Oil Co.'s No. 1 Dan Kosub .....T.D. 1,579 ft; set csg.

ECKERT POOL—BEXAR COUNTY

Alamo Nat. Gas Co.'s No. 3 J. H. Gembler, 180 ft. from N and E lines of tr. in A. Manachaca Sur. 51..T.D. 1,216 ft.; drlg.

F. H. Eckert & Son's No. 9 Sandemer, 150 ft. to N and W lines .....Location.

F. H. Eckert & Son's No. 1 Louis Brehm, W offset to No. 3 John J. Brehm .....Location.

Gatlin Oil Co.'s No. 11 I. A. Beck, 700 ft. from SE line, 156 ft. from SW line of tr. in J. Montes Sur. ..Location.

Gatlin Oil Co.'s No. 11 I. A. Beck, 700 ft. from SE line, 156 ft. from SW line of tr, in J. Montes Sur. ..T.D. 495 ft.; drlg.

L. W. Stieren's No. 1 Annis Terrell, 150 ft. from N and E lines of lease in J. Martinez Sur. .....Spudded in.

W. R. Swearingen's No. 8 Halbadier in Perez Sur. .....675 ft.; comp. 8 bbls.

W. K. O. & G. Co.'s No. 3 Strunk, 300 ft. E of No. 2 ...Location.

W. K. Oil Co.'s No. 1 Strunk, 150 ft. S of N line, 150 ft. W of E line, John Grant Sur. .....T.D. 150 ft.; drlg.

W. K. Oil Co.'s No. 2 Strunk, 150 ft. from S line, 1,051 ft. W of E line, Juan Mantes Sur. .....Drlg.

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New Montgomery County Well Comes In

Heep Well, First Drilled Since Strake Discovery, Making Wet Gas. New Drilling Play at East Hackberry Dome. More Activity on Coast

By Neil Williams
Staff Correspondent, Gulf Coast Fields

HOUSTON, Tex., Apr. 11.—The Conroe district of Montgomery County, Texas, apparently has its second producer with the bringing in Monday of Heep Oil Corp.'s No. 1 Cartwright. As the discovery well came in, this well late in the day was making only wet gas. No estimates of production are available at this time, but the well is showing a working pressure of 1,700 pounds on the tubing and 300 pounds on the casing while blowing into the pits. With tubing closed in the casing pressure ran up to 1,000 pounds. It is being completed through a three-eighths-inch choke on the casing and a quarter-inch choke on the tubing. The well was washed in shortly before noon Monday.

A total of 102 feet of 5½-inch screen was set in the sand at a total depth of 5,078 feet. On top of the screen is 153 feet of blank with packer, with tubing run from top to 90 feet inside the liner. On the bottom of the tubing is a three-quarters-inch choke.

Location of the well is in the John O. Davis Survey, approximately 1¼ miles to the northeast of the discovery well. The latter, Strake Oil Corp.'s No. 1 South Texas Development Co., Theodore Slade Survey, was completed last December as a wet gas well from the same sand but at a total depth of only 4,991 feet. It since has started making some oil with a present production of better than 100 bbls. daily. The Heep well is the first test drilled since the Strake completion and the two are the only producers in the entire county. Elevation of the latter is 224 feet against 199 feet in the discovery well.

In view of the fact that the Heep well is the first test which has been drilled in the district, as well as in the county, since the completion of the Strake producer last December, drilling of the former has been watched closely to determine something of the structural conditions and trends of the area. Montgomery County is in entirely virgin territory just north of the salt dome district and comparatively little is known of it geologically. Except that production is from a formation identified either as being in the Dibollensis zone of the Jackson or else the upper Yequa, the same as at Pettus in Southwest Texas, and that the area is on the same general trend of play as Pettus, Raccoon Bend, etc., geologists so far have very little on which to base opinions, and since its completion, the Strake well has been just a wildcat producer sitting in about the middle of a large unproductive and little drilled county.

Old Tests Negative

A drill stem test was made in the old Kelley-Baker test, No. 2 Jergus, now known as Wilson Oil Co.'s No. 2 Leiberman, during the week with negative results. The test was in a sand at 3,551-70 feet which was encountered in the drilling of the test over a year ago. Bottom of the hole now is given as 4,922 feet, which is a corrected figure over the 4,890 feet, which was reported when the hole was abandoned temporarily last July. This test is in the D. James Survey, west of Conroe, and about 7 miles to the west and north of the Strake discovery producer.

Although no additional locations were made known the past week in the Conroe district, several are due to be made immediately. Reports of these contracted locations were made in the April 7 issue of The Oil and Gas Journal. A location is reported to have been made by Charles Goldstein on the Sealey 3,573-acre tract in the Jonathan C. Pitts Survey recently leased by Ed Parsons and associates of Fort Worth and on which a $10,000 cash forfeiture was put up for two wells. However, an actual check on that location has not been made known. The Parsons interests also were scheduled to make a location on the Drought tract in the Kronkrite Survey in the Willis district, 12 miles north of Conroe.

New Tests

Strake Oil Corp. has spudded in on its second test, No. 2 South Texas Development Co., which is being drilled as a part of the development program provided in the recent trade by this company with the Humble Oil & Refining Co. This test tentatively has been reported as being 2,200 feet south and 4 degrees east of No. 1 although measurements of the location are subject to correction.

Heep Oil Corp.'s No. 1 Roberts, 431 feet from the south line and 439 feet from the east line of the tract in the William H. Harrison Survey, is standing a derrick. The rig for this test probably will be moved from the Cartwright well. The Roberts test is over 1½ miles to the northwest of the Cartwright lease and about 2½ miles northeast of the Strake discovery well.

Salt Dome Completions

In the salt dome district a number of good wells were completed and extensions of production made during the week. Chief among these was Union Sulphur Co.'s No. 769 fee, 295 feet south and 918 feet west of the center of Section 29-9s-10w, Sulphur Dome, Calcasieu Parish, Louisiana, which came in flowing 2,500 bbls. of pipe line oil daily, 300 pounds pressure, through a three-quarters-inch choke from sand at 3,822-35 feet. Production of this well, however, steadily increased to around 3,400 bbls. daily when some water began showing up and the well was pinched back to a one-half-inch choke.

At Port Barre, St. Landry Parish, Louisiana, Port Barre Oil Co.'s No. 1 Sibille, on a sublease from Gulf Refining Co., was completed flowing 500 bbls. daily with one joint of screen set at 3,384 feet. This is on the north flank of the dome in the vicinity of Gulf Refining Co.'s No. 1 Wilson & Cockran, which recently opened a new sand at 3,197 feet and extended production 1,200 feet around the dome.

Pop Oil Co.'s No. 1 Esponge Vizier, Leesville, LaFourche Parish, Louisiana, has been completed flowing 800 bbls. net oil, 20 per cent water, from sand at 3,711-34 feet. This well is 78 feet north and 289 feet east of The Texas Company's No. 4 L. L. & E., completed two weeks ago in the same sand, and is the fourth producer for the field.

Port Neches Extension

Production at Port Neches, southwestern Orange County, was extended 500 feet northeast by The Texas Company which completed its No. 3 Polk good for 300 bbls. daily from sand at a total depth of 3,153 feet. This is the first completion in that field since December, 1930, when operations were suspended. Up to that time six wells had been completed, four in the 3,100-foot sand, one at 4,416 feet and the sixth at 6,045 feet. The field is owned by The Texas Company.

New Drilling Play

A new drilling play is seen at East Hackberry with the making of a half dozen new locations there as a result of the recent completion of Calcasieu Oil Co.'s No. 1 Unsurveyed Island. The latter well, which not only opened a new pool on top of the dome but established first cap rock production there, has proved one of the best producers yet completed at Hackberry. The well came in flowing initially 2,000 bbls. daily but since then has steadily increased and during the past week was making nearly 4,300 bbls. Bottom of the well is 2,865 feet, the lime rock cap from which it is producing being topped at 2,719 feet. The two other shallow pools opened on top the dome are producing from overlying sands. Hackberry also has other production in flank sands skirting the dome on the south side and on the extreme northwest flank, a deep wildcat producer was completed by Union Sulphur Co. several weeks ago.

A noticeable amount of additional new activity is starting up on the Gulf Coast scattered over a wide number of fields and areas. Included in this is the resumption of work at Sweet Lake, Cameron Parish, Louisiana, by Pure Oil Co., which has made location for No. 11 Yount Lee Oil Co., 800 feet south, 66 degrees 42 minutes east of No. 9. The latter company also has made location for another test at Lost Lake, Chambers County, Texas, this being No. 15 Mayes, 450 feet northeast of No. 11 and 450 feet northwest of No. 14.

Markham Dome

The Texas Company has derrick up for a semiwildcat on the extreme northeast side of Markham Dome. This will be on the Texas Pipe Line Co. tract, Block 5, William Hadden Survey. The location is 50 feet out of the northeast corner. Claude Hamill and associates' No. 1 Northern Irrigation Co., on the same side of the dome but a rank wildcat some distance to the north, so far has failed to make a well. This test had a good looking sand at a total depth of 3,504 feet and set 13 feet of screen but would not flow. It is thought the hole sanded and efforts are being made to pull screen and reset. United North & South Development Co.'s No. 1 McDonald, also on the northeast side of the dome, tested dry in sand at 3,577-81 feet. Several weeks ago this test swabbed some oil from that horizon and was estimated as good for a 100-bbl. pumper but was deepened to a sand at 3,678-98 feet, where it tested salt water, and then was plugged to the original sand.

GULF COAST FIELDS AND WILDCATS

Week Ending April 9

BARBERS HILL—CHAMBERS COUNTY

Company, farm and location—	Remarks:
R. E. Ferrell's No. 2 Wilburn, Henry Griffith League, 215 ft. W of No. 1 in center of 45-acre tract	Drlg. salt 2,436 ft.
Gulf Prod. Co.'s No. 8 Wilburn, Henry Griffith League, W of No. 7	Drlg. gumbo 210 ft.
Humble Oil & Ref. Co.'s No. 1 Kirby, Henry Griffith League, 520 ft. N along E line from SE cor. of tract, thence 75 ft. W at right angles, thence 75 ft. N at right angles	Location.
McAlbert Oil Co.'s No. 2-B Higgins, Wm. Hodges Sur., 265 ft. from N line and 50 ft. from W line of tract	Drlg. sandy shale 952 ft.
Mills Bennett Prod. Co.'s No. 1-B Gulf fee, Wm. Bloodgood Sur., 500 ft. E and 50 ft. N of SW cor. of "B" lease	Drlg. salt 3,019 ft.; top of salt 1,706 ft.
Mills Bennett Prod. Co.'s No. 1 E. W. Barber, Henry Griffith League, approx. 300 ft. in westerly direction from No. 3-A	Location.
Mills Bennett Prod. Co.'s No. 2 J. C. Means, Henry Griffith Sur., 300 ft. W of No. 2 in center of strip	Drlg. salt 1,898 ft.; top of salt 1,425 ft.
Rio Bravo Oil Co.'s No. 3 Fisher, Wm. Bloodgood Sur., 300 ft. E and 33 ft. S of NW cor. of tract	Drlg. gumbo and lime 1,501 ft.
Sinclair Oil & Gas Co.'s No. 12 Wilburn, Wm. Hodges Sur., 150 ft. W of No. 10 and 50 ft. N of S line	Drlg. sandy shale 1,049 ft.
Sun Oil Co.'s No. 7 Chambers (W.O.), Wm. Bloodgood Sur.	T.D. 4,583 ft.; rig up to work over.
Sun Oil Co.'s No. 14 J. Wilburn, Henry Hodges Sur., 150 ft. W of No. 12 and 50 ft. from N line	Rock 1,358 ft.; losing returns.
The Texas Company's No. 6 Wilburn (D.D.), Henry Griffith League	Pulling liner to deepen 5,000 ft.
Texas Gulf Producing Co.'s No. 1 Scott Fitzgerald, 125 ft. from S line and 71 ft. from E line of Strip No. 1, Henry, Griffith League	Drlg. heaving shale 5,528 ft.
Texas Gulf Producing Co.'s No. 9-B Kirby, Henry Griffith League, 50 ft. out of SW cor. of J. M. Fitzgerald 50-acre tract and 110 ft. S of N line of Kirby tract	Drlg. salt 2,370 ft.
Texas Gulf Producing Co.'s No. 7-A Barber, Henry Griffith League, 712 ft. from W line and 225 ft. from N line of tract	Drlg. salt 3,220 ft.; top of salt 2,920 ft.

DAMON MOUND—BRAZORIA COUNTY

Intercoastal Oil Co.'s No. 9 Wisdom, S 45 deg. 312 ft. from NE cor. Lot C, Blk. 62, A. Darst Sur., and thence S 45 deg. 325 ft. in Lot A	Drlg. shale 2,973 ft.
The Texas Company's No. 2 Cave, 165 ft. NE and 55 ft. N, 45 deg. W from S cor. Lot B, Blk. 73, Wisdom Subd., A. Darst Sur.	Heaving shale 4,119 ft.; washing to bottom.

LOST LAKE—CHAMBERS COUNTY

Pure Oil Co.'s No. 15 Mayes, E. Wallis Sur., 450 ft. NE of No. 11 and 450 ft. NW of No. 14	Derrick.

BLUE RIDGE—FORT BEND COUNTY

Gulf Prod. Co.'s No. 19 Luscher, Thos. Habermacher Sur., 1,650 ft. from N line and 550 ft. from E line of 490-acre tract	Set 47 ft. of 4½-in. screen 4,292 ft.; tested salt water; pulling screen to deepen.

ORCHARD—FORT BEND COUNTY

Gulf Prod. Co.'s No. 32 Moore, Jas. Frazier Sur., N of No. 20	Drlg. hard sand rock 3,625 ft.

RABBS RIDGE—FORT BEND COUNTY

Gulf Prod. Co. and Humble Oil & Ref. Co.'s No. 2 Booth, Samuel Kennedy Sur., 475 ft. from S line and 600 ft. E of No. 1	Drlg. hard sand 625 ft.
Gulf Prod. Co. and Humble Oil & Ref. Co.'s No. 3 Booth-Meyers, John Rabb Sur., 1,500 ft. E of No. 2	Derrick.
Humble Oil & Ref. Co. and Gulf Prod. Co.'s No. 3 Lockwood, John Rabb Sur., 1,000 ft. due E of No. 2	Rig.

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Hobbs Potential Production Reduced

Opening of Public Domain Leads to Rush of Applicants for Permits. Frannie Field Being Given Production Test

By Tolbert R. Ingram
Staff Correspondent, Rocky Mountain Area

DENVER, Colo., Apr. 11.—The potential production of the Hobbs Pool has been reduced from 1,168,515 to 1,144,435 bbls. daily due to three units being given special allowances on account of water intrusion. These wells are on the southwestern side where water heretofore has been reported in five wells. Hobbs operators are expected to accept the revised proration agreement submitted by Governor Seligman. One new operation was started near the Compton Pool in Eddy County, and R. D. Compton's No. 4 Brainard averaged 30 bbls. a day on a pumping test before drilling deeper. The Kutz Canon Oil & Gas Co.'s No. 1 Day, in San Juan County, is at an interesting depth. Gas from this well caught fire and injured three workmen.

Secretary Wilbur's order reopening the public domain for prospecting for oil is causing a rush of applicants for prospecting permits and a revival of wildcatting on government land is in prospect. More than 100,000 acres were applied for the first day in the Denver land office alone. The Platte Valley Petroleum Co. lost in a decision in the District Court at Fort Morgan in litigation involving its lease on 320 acres east of the producing wells at Greasewood.

The Standard Oil Co. of Indiana is discontinuing operation of its refinery at Laramie, Wyo. Two contracts for the purchase of oil from the Dallas-Derby and Hudson Fields expired on April 1 and were not renewed, and other markets were arranged. The Frannie Field is being given a production test and is making 2,200 bbls. from six producers. Three new locations were made in the Osage Field and an acreage deal was made on the basis of $2,000 per barrel of production.

A deal for a minimum of 500 bbls. of crude daily from the Carbon Oil & Gas Co.'s well on the Dry Creek Dome in Montana was concluded the past week. A test on the Opheim Dome, near the Canadian line, was announced. Several wells shut down for the winter are resuming.

NEW MEXICO

The proration schedule for the Hobbs Pool for the first half of April reduces the potential of the field from 1,168,515 bbls. daily as of March 1 to 1,144,435 bbls. as of April 1, a decrease of 24,080 bbls. daily, and the number of 40-acre units in production under proration from 133 to 130. This reduction was due to the granting of special allowances on account of water for wells on three units. The wells involved are Midwest Refining Co.'s No. 11 McKinley, C NE SW, Section 5-19-38, which previously had carried a potential of 8,230 bbls. daily; Sun Oil Co.'s No. 2 McKinley, C SE NE, Section 5-19-39, which had a potential of 4,850 bbls. daily; and The Texas Company's No. 2 McKinley, C NE SE, Section 5-19-38, which had a potential of 11,000 bbls. These wells are offsets to wells which already were producing under special allowances due to water intrusion. Altogether there are eight wells which have been granted special allowances. In addition to those named, the others are Ohio Oil Co.'s No. 1 State, NE SE SW, Section 9-19-38, an edge well which came in several years ago and which showed water from the start; Continental Oil Co.'s No. 1-C State, C NW SE, Section 5-19-38; Sun Oil Co.'s No. 4 McKinley, C SW NE, Section 5-19-38; Midwest Refining Co.'s No. 26 McKinley, C SE NW, Section 5-19-38; and Landreth Production Co.'s No. 1 State, NE NW, Section 6-19-38. These wells are all on the southwestern edge of the structure and are offsets to each other with the exception of the Ohio and Landreth wells. This is the only part of the field where water has made any serious intrusions and even here the engineers have the problem well in hand. The allowable outlet for the field for the first half of April is 31,376 bbls. daily, practically the same as has been in effect for the past month.

The proposed proration agreement between the State and the operators in the Hobbs Pool submitted to Chairman E. G. Allen by Governor Arthur Seligman as a substitute for the one signed last January by the operators and James F. Hinkle, commissioner of the New Mexico land office, but which was not approved by the governor, is being signed by the operators. Its adoption is practically assured as all the operators to whom it has been submitted, about half of the total, have attached their signatures and the others are expected to do likewise as soon as it is received. The substitute agreement is practically the same as the original except that it gives to the state geologist the privilege of withdrawing from the agreement on behalf of the State at the end of six months upon 30 days' notice, the same as the operators, in which event the agreement becomes inoperative. It will be dated back to January 10, the date of the other agreement. Both of them allowed the operators the right to construct storage in the field.

Lea County

While there are only four active operations in Lea County at this time, all of them in the Hobbs Pool, this number is expected to be increased shortly. A crew of 15 engineers and geologists for The Texas Company recently arrived at Hobbs and other major companies have been doing extensive geological work in that county during the lull in drilling operations.

Midwest Refining Co.'s No. 8 Turner, C NW SW, Section 34-18-38, in the Hobbs Pool, is drilling at 3,931 feet in lime. This well had some very good oil shows at 3,202-12 feet and 3,596 feet. Same company's No. 29 State, C SW SW, Section 10-19-38, cemented 10-inch with 200 sacks at 1,617 feet in anhydrite, and its No. 8 Terry, C NW SW, Section 10-19-38, is drilling at 120 feet in sand and shells. Last named began spudding March 31.

Amerada Petroleum Corp.'s No. 1 Hardin, SW cor., Section 18-18-38, an outside well at the north end of the field, spudded on March 24 and cemented the 15½-inch at 222 feet in the red beds with 250 sacks.

Eddy County

One new operation was rigging up in the Artesia area, near the Compton Pool, in W. A. Scott's No. 1 Kaiser, on a patented tract in the NW SE, Section 7-18s-27, about 2 miles to the west of the producers on the Brainard tract. The Etz Drilling Co. will drill the test for acreage around the well and Flynn, Welch & Yates will furnish the 10 and 8¼-inch casing for acreage.

R. D. Compton's No. 4 Brainard, SE SE, Section 5-18-27, was drilled to 1,275 feet, 1 foot in the pay, and was put on the pump for a test. It averaged 30 bbls. per day. It is planned to drill deeper before completing.

Runs from the Jackson Pool were increased 300 bbls. per day beginning April 1, bringing daily runs up to close to 1,000 bbls.

Grayburg Oil Co.'s No. 3 Burch, C SW NW, Section 19-17-30, in the Jackson area, is drilling at 2,675 feet in white lime. It had a show of oil at 2,495-2,500 feet and another at 2,520-25 feet, amounting to about 4 bbls. per day. It is showing up much better than No. 2 Burch, which it offsets on the north, and which was rated at 45 bbls. per day at a total depth of 3,204 feet when completed.

Avalon Oil Co.'s No. 1 State, NE cor. SE, Section 26-20-27, southwest of the Getty Pool, is drilling at 310 feet in gypsum.

Chaves County

Warman Oil Trust's No. 1 Evans, N half, Section 15-14s-25, about which little information is given out, is reported bottomed at 1,203 feet in lime and fishing for bit. The 5⅜-inch is reported at 1,200 feet.

Curry County

G. W. Trout and others' No. 1 Hart, NW SW NW, Section 24-2n-31, set the 6⅝-inch at 580 feet and then drilled into salt water at 610-627 feet, the water rising 150 feet in the hole. The pipe was then pulled to straightream to reset at 750 feet. This is being drilled for water for deep test in Section 19.

DeBaca County

Landowners Oil Co.'s No. 1 McAdoo, SW cor. NE, Section 16-1s-27, Buffalo Creek, is drilling at 4,702 feet. The 6⅝-inch was cemented at 4,675 feet.

Colonel Montgomery, of Amarillo, Tex., has taken over Matador Oil Co.'s No. 1 Wood, NE SW SW, Section 6-4n-20, Salada Creek, and is cleaning out to resume at 3,500 feet. The 5⅜-inch was cemented at 3,495 feet.

San Juan County

Kutz Canon Oil & Gas Co.'s No. 1 Day, SW cor., Section 20-28-10, Kutz Canon district, is drilling in coal at 3,797 feet and progress is slow due to heavy gas pressure. Two thousand feet of water is being carried in the hole, but this failed to hold down the pressure and some of the gas escaping became ignited the past week and caused an explosion. Three employes, Lionel Palmer, Nick Brink and Tom Irvin were severely burned. The well is making about 2,000,000 feet of gas from the Farmington sands and 1,000,000 feet from the first sand in the Mesa Verde. The last named sand was found at 3,125 feet and the presence of the gas is considered very encouraging as this sand is barren at Hospah and in other wells drilled in that area. The coal was topped at 3,759 feet. This coal strata is considered a good marker and lies just above the objective, the Point Lookout sand in the lower Mesa Verde. The Point Lookout is the pay sand at Hospah.

Continental Oil Co.'s No. 24, SW NW SW, Section 1-29-19, Rattlesnake Dome, is bottomed at 7,008 feet. Some calculations put the bottom at about 33 feet off the objective horizon which was productive in No. 17, the discovery well in the Pennsylvanian. These same calculations, based on the bottom of the red beds, indicate that No. 24 is running about 254 feet lower than No. 17.

Rio Arriba County

Governardo Dome Oil Co.'s No. 1, NW NE NE, Section 15-29-7w, is drilling at 2,070 feet and is believed to be near the top of the Farmington formation.

COLORADO

Secretary Wilbur's order issued on April 4 reopening the public domain for prospecting for oil and gas resulted in

(Continued on Page 59)

NEW TEST ON ATHABASKA RIVER NORTH OF EDMONTON, ALBERTA

By Victor Lauriston
Staff Correspondent, Canadian Fields

CHATHAM, Ontario, Apr. 9.—An important new development in northern Alberta is being undertaken by Athadome Oils, Ltd., backed by Toronto, Ottawa and Chatham capital. A contract has been signed with F. H. Stover & Son of Chatham for drilling a series of wells on the company's acreage on the Athabaska River, north of Edmonton, Alberta, and equipment is now being shipped. In the Athabaska area, the Athadome company has approximately 32,000 acres. Directors of the company include Major S. Robins, Dr. T. B. Armstrong, Senators Pope and Gillies of Ottawa, Phil Grise of Midland and W. H. Wright of Barrie. R. C. Skene of Chatham will superintend the field work.

There has been relatively little drilling in this section of Alberta, and the only active test in recent years in northern Alberta has been that of Crudome Oils, Ltd., at Mirror Landing, a considerable distance from the Athadome holdings.

South Turner Valley

In the South Turner Valley, Wellington Oil & Gas Co.'s No. 1, LSD 1, Section 20-19-2w5, has a flow of 31,500,000 feet of wet gas with a crude naphtha recovery between 85 and 90 bbls. a day.

Crude Oil From Lime

In LSD 11, Section 4-19-2w5, Miracle Oils' No. 3 is reported starting to flow by heads as a result of gas accumulation, making around 45 bbls. of 45 gravity oil a day.

The only other well in the Turner Valley Field producing crude oil from the lime is Model Oils' No. 1 in LSD 8, Section 22-20-3w5, in North Turner Valley. Like Miracle's No. 3, the Model well got its production around 6,000 feet. It was first reported a crude naphtha producer, but the production settled to a light crude of about 54 gravity, while the daily yield increased materially after some months. Model Oils' No. 1 has only a small gas flow, but sufficient to make the well produce. Miracle's No. 3 is regarded as indicating new possibilities of the deep lime in the south end of the field.

Central Turner Valley

In the Central Turner Valley Field, McLeod Oil Co.'s No. 1, LSD 16, Section 1-20-3w5, shows a fairly large wet gas flow, with a good crude naphtha recovery.

Mayland Oil

Shareholders of Mayland Oil Co. have elected the following officers: President, J. H. McLeod; vice president, Glen C. Hyatt, Vancouver; directors, F. R. Mc-

(Continued on Page 44)

Producing Too Much Oil in California

Upward Trend Since April 1 Threatens Curtailment Program. Lessors Partly to Blame. Unitization Being Discussed

By L. P. Stockman
Staff Correspondent, California Fields

LOS ANGELES, Calif., Apr. 9.—Crude oil production in California, reflecting increases in the Dominguez, Richfield, Santa Fe Springs, Seal Beach and West Coyote Fields, registered a substantial increase during the past week and developments indicate the probability that state production will show a further gain next week. Daily production showed a consistent upward trend all during the week, jumping from a low of 503,000 bbls. to a high of 519,000 bbls. The substantial increase recorded in state production since April 1 may have a decided effect on the existing curtailment program and may lead to a general breakdown of curtailment. A number of factors are responsible for the substantial increase in production since the first of the month, not the least of which is the insistence of lessors that producing companies resume unrestricted production. This condition is particularly conspicuous at Dominguez where the Union Oil Co. has been obliged to resume production against its wishes. The significance which attaches to this lies in the fact that it may precipitate a crisis in the existing curtailment program and ultimately lead to softening of crude and refined oil prices. As time goes on it becomes more evident that compulsory regulation offers the only hope of permanent relief. Producers, due to the insistence of lessors, are up the proverbial creek, and must drift with the current unless relief is afforded by passage of the Sharkey Bill next month or the subsequent enactment of some other form of remedial legislation.

Study of Reserves

The substantial increase in production registered during the past week should definitely set at rest any question as to California's future reserve of crude oil. Some are inclined to believe that California may be faced with a shortage of crude oil due to the depletion of reserves within the next two years. It might not be amiss to specify therefore that this condition could only arise as a result of abnormal shipments of crude and refined oils to foreign and domestic ports and a general suspension of production activities in several fields. It might also be pertinent to call attention to the fact that while some of the State's reserve will normally be reduced during the next two years, California will still be able to produce more oil in the future than it has produced up to the present time. California has produced 3,755,445,919 bbls. of crude oil up to the close of February, 1932. Conservative estimates indicate a probable ultimate production in excess of 4,000,000,000 bbls. from present known proven fields. This should be substantially increased when the existence of commercial production is definitely established in the Middle Dome of Kettleman Hills and may be still further increased if the Belridge Oil Co. finds the Kreyenhagen highly productive in the North Belridge Field of Kern County. Any talk of a substantial reduction in California's crude oil reserves during the next two years is not supported in fact. Deep zones in the Dominguez, Inglewood and West Coyote Fields, together with virgin zones existing in the Elwood and Ventura Avenue Fields and possibly deeper zones in San Joaquin Valley fields, cannot be laughed off. Some companies, of course, may not be sitting on top of the world, at present, but considering the State as a whole, there is an ample supply of both light and heavy crude oil for a number of years. In addition to the visible supply, improved methods of production will increase the ultimate recovery, while improved methods in refining operations will reduce the quantity of crude oil necessary to produce a barrel of gasoline.

Unit Operation a Live Subject

Unit operation of production and development work is still a live subject in California despite the failure of operators in the Dominguez, Seal Beach and Elwood Fields to successfully consummate definite plans for the unification of operations in the fields mentioned. The inability of producers and lessors to adjust differences of opinion regarding their respective equities is undoubtedly the chief stumbling block which has prevented unified effort. Several committees have been appointed to stimulate interest in unit operation from time to time but with the exception of Kettleman, this work has gone for naught. E. B. Reeser, president of the Barnsdall Oil Corp., proposed to unify operations in the Elwood Field of Santa Barbara County several months ago but this question is still unsettled The plan involving this field was to cover all zones below the present productive Vaqueros formation. An engineering committee was appointed, consisting of Frank A. Morgan, Rio Grande Oil Co.; Dave Caldwell, Barnsdall Oil Co.; R. R. Templeton, Pacific Western; Harry Abruns, Bankline Oil Co.; L. A. Cranson, Honolulu Consolidated; B. Lycan, Seaward Oil Co.; Harry Godde, Signal Oil & Gas Co., and D. Bernt of the C. C. Spalding interests, to formulate tentative plans for unified operation at Elwood. In the absence of any definite announcement, it is logical to assume that nothing definite has been decided upon up to the present. An early decision is expected, however, as the drilling moratorium which has been in effect for several months expired April 1. Operators have tentatively agreed to permit the properties at Elwood to remain in status quo pending final decision of the question at issue.

More recently the Union Oil Co. has proposed a unification of operations in the Dominguez Field of Los Angeles Basin but has apparently been unable to bring about the desired consolidation of effort. This proposal is still under consideration, however, and may subsequently take definite form. The delay encountered in efforts to unify operations in this field is particularly unfortunate in view of the insistence of lessors for unrestricted production, as this factor may have an unfavorable effect on existing mutual agreements. During the past few weeks an attempt has been made to form a third unit plan of development in the North Dome of Kettleman Hills. This program involves the Superior's Huffman lease and the King lease of the Union and Amerada Petroleum. It is quite likely, in view of the high cost of drilling wells in the North Dome, that this unit plan may subsequently be brought to a successful conclusion. A deal of this nature involving the 160-acre Huffman property and the 160-acre King property would be mutually advantageous to all concerned. In addition to reducing operating costs, the Superior and the lessors involved would be assured of an outlet for all current production through the Union Oil Co. An assured outlet, incidentally, would protect the Superior Oil Co. in the event that production of Kettleman Hills might get beyond control. Unit operation should prove especially advantageous in the Inglewood and Seal Beach Fields of Los Angeles Basin and something definite may result from efforts along this line at a later date. The Standard and Continental have been considering the advisability of unifying operations in the Seal Beach Field but have been unable to effect any definite agreement up to the present.

Efforts to effect unified development in California fields are particularly timely in view of existing curtailment work and because of the possibility that the Sharkey Oil Conservation Bill may become a law after May 3. If the Sharkey Bill should become a law, it should stimulate efforts to unify development in all fields susceptible to single maganement. This would greatly simplify enforcement of the bill in question as the commissioners would only have to allocate a field its maximum allowable daily production and the unit committee would therefore be able to comply with the regulations with a minimum of effort and free of any disputes between operators in the field. It will be interesting to watch the method of determining allocations in the event that the Sharkey Oil Conservation Bill becomes a law. Under the existing curtailment program, Umpire Neal Anderson has adopted a different procedure in some areas due to local conditions which might differ from those prevailing in other fields.

Curtailment in Midway-Sunset

In the Midway-Sunset Field of Kern County, production is curtailed on a graduated method which consists of classifying operators into several groups based upon potential production and the ability of members to curtail. The Midway-Sunset method resulted from a meeting of the West Side Operators Committee which was called to meet an urgent need for an equitable workable plan of curtailment. This method has been used in the Midway-Sunset Field for approximately two years. In explaining this method, R. E. Allen, assistant umpire, says: "There are four factors which have received consideration for individual or collective use as factors for the determination of production allotments. They may be listed in the order of the accuracy of their values as ordinarily determinable. They are (a) the number of producing wells; (b) the amount of proven acreage; (c) potential production; (d) estimated recoverable reserves. The principle of graduated curtailment is distinct from that of ordinary proration in that straight proration of potential imposes an equal percentage of curtailment on every well and lease in a given field while with graduated curtailment the percentage of curtailment varies directly with either the total potential of an operator or with the average well potential of a lease, preferably the latter. There is also a similarity between graduated curtailment and normal well decline because the larger the well the greater the rate or percentage of decline under usual conditions.

"The simplest and easiest method of devising a graduated curtailment classification based only on potential production with virtually as many groups as there are leases in a field, is to assign an allotment equal to some fractional power of the potential rather than some percentage of the potential. From the viewpoint of those who try to adjust the curtailment burden to the capacity of the bearer, the fractional power method of determining allotments offers about the quickest and easiest procedure available for obtaining graduated allotments based only upon potential production. There are two common methods of giving weight to proved acreage in the allocation of production quotas. One method commonly employed in unit plans is to allocate to each proved acre an equal portion of the total quota available for acreage distribution. The other method gives consideration to the variable productivity of different areas of a field and allocates acreage allotments according to a factor which is obtained by multiplying the average well potential of the property by either the proved acreage or the number of proved locations. The factor thus obtained is some times called the factor of relative worth. During March, 1932, the operators in 15 of California's 40 fields received allotments based on the number of their producing wells and the potential remaining to those wells after the allocation of an initial allotment to each well. In eight fields, graduated allotments were received by operators according to the group or class in which their total field potential caused them to fall. These allotments in eight fields were determined by straight proration of potential while the allotments in the other nine fields were variously determined by use of a power factor and by arbitration and compromise. There has thus been a distinct trend away from potential produc-

TANKER SHIPMENTS FROM LOS ANGELES TO DOMESTIC AND FOREIGN PORTS

Intercoastal-	March 26, 1932 Total this week	March 26, 1932 Daily average	March 19, 1932 Total last week	March 19, 1932 Daily average	This year to date	Same time last year
Diesel and gas oil	.....	.....	.....	.....	46,225	679,024
Gasoline	214,399	30,628	520,679	74,383	1,571,303	3,636,251
Foreign exports—						
Crude oil	120,626	17,232	213,934	30,562	2,174,279	1,841,038
Fuel oil	211,489	30,213	226,707	32,387	2,382,598	3,696,672
Diesel and gas oil	109,712	15,673	2,860	409	566,952	961,734
Gasoline	218,131	31,162	103,423	14,775	2,287,771	2,229,708
Kerosene	145,935	20,848	.....	.....	715,339	305,514
Lubricants	.....	.....	.....	.....	.....	6,928
Naphtha distillates	.....	.....	.....	.....	41,175	.....
Coastwise-domestic—						
Crude oil	527,677	75,382	250,853	37,265	3,805,964	4,994,538
Fuel oil	439,371	62,767	278,451	39,779	3,792,208	3,793,099
Diesel and gas oil	34,203	4,886	5,675	811	437,409	409,582
Gasoline	169,463	24,209	351,460	50,209	3,162,959	2,743,149
Kerosene	.....	.....	5,232	747	39,304	106,471
Naphtha distillates	.....	.....	.....	.....	.....	4,952

TANKER SHIPMENTS FROM SAN FRANCISCO TO DOMESTIC AND FOREIGN PORTS

Intercoastal-domestic—						
Diesel and gas oil	70,995	10,142	.....	.....	70,995	.....
Gasoline	78,340	11,191	.....	.....	146,441	63,975
Lubricants	.....	.....	.....	.....	7,849	11,000
Foreign exports—						
Crude oil	.....	.....	147,507	21,072	418,985	6,010
Fuel oil	.....	.....	.....	.....	442,083	198,876
Diesel and gas oil	2,940	420	.....	.....	253,931	127,617
Gasoline	98,049	14,007	.....	.....	705,864	797,824
Kerosene	72,934	10,419	.....	.....	253,284	190,412
Lubricants	13,659	1,808	.....	.....	20,884	.....
Coastwise-domestic—						
Fuel oil	126,900	18,129	.....	.....	591,400	1,035,460
Diesel and gas oil	13,131	1,876	13,740	1,963	176,747	88,756
Gasoline	.....	.....	34,160	4,880	718,508	702,844
Kerosene	.....	.....	.....	.....	10,857	30,606

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tion as the sole basis of proration in California. The well as a producing unit has come in for consideration in the determining of allotments but proved acreage has yet to receive due recognition as a factor for use in the allocation of production." The last few sentences of Assistant Umpire Allen's resume covering the method of determining allotments is of special interest because the methods employed under the existing curtailment program will undoubtedly be employed to some extent in the enforcement of the Sharkey Oil Conservation Bill if this measure becomes a law. The inequity of applying an equal percentage of cut among all wells irrespective of potential daily production is generally recognized and will no doubt receive special consideration of the Oil Conservation Board in a manner somewhat similar to that employed by Umpire Neal Anderson and his assistants.

Fruitvale

There were no new wells finished in the Fruitvale Field of Kern County during the past week but operators will no doubt make up for lost time during the next seven-day period. The Mohawk Petroleum, Sea Hawk and the Western Gulf Oil Co. are expected to finish new wells some time during the coming week. The latter company has three wells nearing completion, all of which should be finished within the next 15 days. The Plymouth Oil Co., which successfully completed its No. 2 Fairhaven some 10 days ago, was obliged to shut in this well due to the lack of adequate storage facilities and the inability to dispose of current production. Out on the West Front of the Kern River Field the Chanslor-Canfield Midway Oil Co. successfully completed well No. 40 in Section 23-28-27 pumping 208 bbls. of 15.3 gravity oil per day from 2,103 feet. Immediately upon the completion of this project the crew was shifted to well No. 41 in the same section to rig up rotary equipment for early work. In the Round Mountain Field of Kern County the California Western Oil Co. completed No. 1 Signal pumping 284 bbls. of clean 16.5 gravity oil per day from 1,577 feet. The Modoc Petroleum also finished a new well in the Mount Poso area during the week although its well No. 1 in Section 28-26-28 was only good for 98 bbls. of 15.6 gravity oil per day on the beam from 1,626 feet.

Kettleman Hills

The North Kettleman Oil & Gas Co. is expected to spud in No. 1 Lillis Welsh, an outpost in the extreme western part of the Kettleman Hills Field, some time during the next 36 hours. This well is located on fee acreage just outside of the acreage included in the Kettleman North Dome Association and will prove an important marker for future operations. This well will bear watching as it stands an excellent chance of resulting in commercial production. It appears to be located quite far out on the structure but it is not nearly as wild as some operators believe. As a matter of fact, petroleum engineers familiar with existing conditions in the North Dome expect this well to get commercial production and believe that several good wells will be subsequently completed still farther out in the western end of the structure. The Standard's two new wells to be drilled west of the Huffman area in the western end of the field will probably begin making hole some time within the next three weeks. Rig construction is getting under way and early work is anticipated. The Kettleman North Dome Association is making good progress with its well No. 58-20 J, another project located out in the western end of the field, and preparations are being made to run in and cement a string of 9⅝-inch casing.

The Standard has resumed drilling in its test in the Middle Dome of Kettleman Hills and will proceed to prove up this structure as productive. The company suspended drilling operations about two weeks ago and then suddenly issued instructions to resume work again ostensibly for the purpose of proving up a new field in the Middle Dome and subsequently bringing about a new unit plan of development. No. 1 Burbank of the Petroleum Securities is still held up with mechanical trouble and there does not appear to be much hope of an early recovery. The Petroleum Securities would probably like to pull out of this well if it could do so and still comply with drilling regulations. The Belridge Oil Co. ran into a little fishing job in its deep test in the North Belridge Field of Kern County just before landing a new string of casing with the result that the production test on this well will be delayed until a recovery has been effected. This well has penetrated the Kreyenhagen immediately underlying the productive Temblor and is consequently one of the most important tests under way in the San Joaquin Valley at the present time.

Los Angeles Basin

The Wilshire Annex Oil Co. is making preparations to finish No. 2 Potrero a new well on the Potrero Country property, quitclaimed more than a year ago by the Associated Oil Co. This well is at the present time standing cemented but should be drilled out and passed for production some time within the next 10 days. The crew from this well has been transferred to No. 1 Potrero, which was mudded off last week by drilling fluid from No. 2. The hole is being cleaned out and while some repair work may be necessary it should be put back on production in the near future. The Baldwin Oil Co. is rotating ahead in oil sand of undetermined productivity in the Inglewood Field of Los Angeles Basin and this outpost may bear watching during the course of the next 10 days. The importance which attaches to the drilling of this well lies in the possibility that it might precipitate deep zone exploitation in the

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GOOD GAS WELL IN MICHIGAN REVIVES PIPE LINE PROPOSAL

By George A. Whitney

MUSKEGON, Mich., Apr. 9.—New interest in the possibilities of laying a natural gas pipe line from the Mount Pleasant area to either Muskegon or to Detroit and other Michigan cities was aroused by the completion of a new 10,000,000-foot gas well on the Pere Marquette railroad right of way, the first of a series of wells which W. J. Sovereign of Bay City plans to drill on the railroad right of way through the Mount Pleasant area. It is located SW NE NW Section 6, Grant Township, Clare County.

The striking of oil on the Root farm test in Section 12, Greendale Township, Midland County, and the drilling in of large wells on the Reed and Mullett farms in Sections 10 and 16, Greendale Township, both in the border proven area, is certain to result in from half to a dozen new tests being started. Offset locations will be drilled to the three good wells while companies holding leases in the near area of the wells are going ahead with drilling operations. The East Pool, opened last May in Section 15, same township, now comprises a pool of about 8 miles in length and 2 miles wide. There are 28 producing wells at present. In the main part of the pool wells range from 700 to 3,600 bbls. a day.

Three new wells have been completed, the largest being Pure Oil Co.'s No. 2 Mullett farm, NW NW NE Section 15, Greendale Township, 330 feet from the north line and 990 feet from the west line, which produced in excess of 3,500 bbls. initial, while the same company's No. 1 well, 990 feet from the north line and 330 feet from the west line of the Emma O. Reed farm, SW NW SW Section 10, Greendale Township, and about a half mile north of No. 2 Mullett, is reported flowing around 3,000 bbls. initial. The Reed lease held by the Pure Oil Co. comprises 1,400 acres and covers the area in the proven pool and the area showing good possibilities north and east. The third producer was Walter L. McClanahan's test on the W. S. Root farm, NW NE SW Section 12, Greendale Township, in the northwest corner of the lease and about 2 miles east and a half mile north. It was brought in with an estimated production around 400 bbls. in the Dundee, but a little deeper drilling brought water at a total depth of 3,553 feet and it dropped to about 300 bbls. Another test, drilled by McClanahan, 330 feet from the south line and 990 feet from the west line of the Corning estate, SE SW SW Section 2, Greendale Township, was also drilled into water and will be abandoned. Although No. 1 Corning failed to make a commercial well, it was regarded by oil men as an edge well, showing the possibilities north of the proven field.

After a shutdown of several months, drilling has been resumed on the Mid-Bay Oil Co.'s No. 1 G. W. Patrick farm, E half W NE Section 24, Midland Township, 3½ miles east of the city of Midland.

IMPORTANT SOUTHERN CALIFORNIA WILDCATS

Company, well and location—	S.T.R.	Depth	Status:
Hines Pet., No. 1 Ocean Park, Los Angeles Co.	9- 2-15	7,414	suspended
Taylor Oil Co., No. 1 Culver, Los Angeles Co.	12- 2-15	6,238	suspended
Westwood Oil Co., No. 2 Hermosa, Los Angeles Co.	6- 4-14	2,151	suspended
Staple Oil Co., No. 1 Manhattan, Los Angeles Co.	24- 3-15	2,700	suspended
Lawndale Pioneers, Inc., No. 1 Peck, Los Angeles Co.	20- 3-14	6,378	prod. test
Barcus, W. I., No. 1 Watson, Los Angeles Co.	28- 4-13	mtl.	building rig
Baldwin Oil Co., No. 9 Inglewood, Los Angeles Co.	7- 2-14	1,601	sd. sh. drilling
Baldwin Hills Synd., No. 1 Inglewood, Los Angeles Co.	17- 2-14	4,090	cemented
Brubaker, W. O., No. 1 Van Nuys, Los Angeles Co.	11- 2-15	2,700	suspended
Rucker & Croul, No. 2 Puente, Los Angeles Co.	27- 2-10	2,200	suspended
El Dorado Oil Co., No. 1 Puente, Los Angeles Co.	30- 2- 9	2,396	hd. sd. drilling
Cudahy Oil Co., No. 1 Bell, Los Angeles Co.	30- 2-12	1,370	suspended
Jones, W. L., No. 1 Bell, Los Angeles Co.	31- 2-12	1,593	cleaning out
Weist Oil Co., No. 1 Montebello, Los Angeles Co.	34- 1-11	4,902	suspended
Blinn & Gray, No. 1 Montebello, Los Angeles Co.	6- 2-11	5,060	recemented
Wardell & Menichini, No. 1 Montebello, Los Angeles Co.	7- 2-11	rig	rigged up
Yellowstone Oil Co., No. 1 Alhambra, Los Angeles Co.	24- 1-13	3,919	suspended
Yellowstone Oil Co., No. 2 Alhambra, Los Angeles Co.	19- 1-12	2,015	suspended
Davidson Oil Co., No. 1 Monterey Park, Los Angeles Co.	32- 1-12	....	location
Rucker, L. W., No. 1 Calabasas, Los Angeles Co.	26- 1-17	1,004	cleaning out
Caballero estates, No. 1 Calabasas, Los Angeles Co.	23- 1-16	1,480	suspended
Marble, Willard, No. 1 Chatsworth, Los Angeles Co.	6- 2-16	1,395	suspended
Ajax Pet., No. 1 Newport, Orange Co.	21- 6-10	7,259	suspended
Nuoil Co., No. 1 Newport, Orange Co.	29- 6-10	1,970	resume work
Beck, Alfred, No. 1 Corona, Riverside Co.	3- 4- 6	1,110	suspended
Spindletop Oil Co., No. 1 Salton Sea, Riverside Co.	25- 7-10	3,590	suspended
Duncan, N. I., No. 1 Sagebrush, Riverside Co.	8- 4- 6	1,157	suspended
Colan Dev. Co., No. 1 Redlands, San Bernardino Co.	25- 1- 2	2,392	sidetracking
Mason Oil Co., No. 1 Salton Sea, Imperial Co.	1-17-15	660	sd. sh. drilling
Woods, D. H., No. 1 Salton Sea, Imperial Co.	7-11-16	755	sd. sh. drilling
Borderland Oil Co., No. 2 Encinitas, San Diego Co.	12-13- 4	2,677	redrilling
South Bay Oil Co., No. 1 Border, San Diego Co.	31-18- 2	1,243	suspended
Itasca Pet. Co., No. 1 Mesa, San Diego Co.	33-18- 1	1,700	cemented
Oklahoma Oil Corp., No. 1 Palms, San Diego Co.	25-11- 8	1,858	sd. sh. drilling
Shannon, C. R., No. 1 Kearney, San Diego Co.	14-15- 3	1,046	redrilling

IMPORTANT NORTHERN CALIFORNIA WILDCATS

Company, well and location—	S.T.R.	Depth	Status:
Standard, No. 1 Santa Rosa Island, Santa Barbara Co.	.....	....	bldg. roads
Barnsdall, No. 1 Los Alamos, Santa Barbara Co.	31- 8-33	3,401	sd. sh. drilling
Western Gulf, No. 1 Santa Maria, Santa Barbara Co.	9- 9-33	8,690	br. sh. drilling
Wilson, N. S., No. 1 Los Alamos, Santa Barbara Co.	2- 7-35	3,592	br. sh. drilling
General Pet., No. 133 Goleta, Santa Barbara Co.	21- 4-23	2,030	suspended
General Pet., No. 136 Goleta, Santa Barbara Co.	21- 4-28	2,047	suspended
General Pet., No. 137 Goleta, Santa Barbara Co.	21- 4-28	2,050	suspended
Johnson, G. W., No. 1-A Goleta, Santa Barbara Co.	19- 4-27	5,554	suspended
Sovereign Oil Co., No. 1 Guadalupe, Santa Barbara Co.	20-10-35	5,500	suspended
Pacific Western, No. 1 Gibraltar, Santa Barbara Co.	14- 5-27	2,345	suspended
Associated, No. 1 Rincon Creek, Ventura Co.	19- 4-24	2,080	suspended
Woodrow Pet., No. 1 Miguelito, Ventura Co.	4- 3-24	rig	rigging up
Bell, H. H., No. 1 South Mountain, Ventura Co.	22- 3-21	2,484	suspended
Pure Oil Co., No. 1 S. F. Canyon, Ventura Co.	15- 4-21	2,591	suspended
Magu Synd., No. 1 Oxnard, Ventura Co.	17- 1-25	5,630	sd. sh. drilling
American Oil Co., No. 1 Conejo, Ventura Co.	33- 2-20	1,590	cleaning out
Graham & Loftus, No. 1 Goose Lake, Kern Co.	20-27-22	6,619	cleaning out
General Pet., No. 1 Buttonwillow, Kern Co.	6-28-23	2,876	sd. sh. drilling
Wilshire Oil Co., No. 1-A Buttonwillow, Kern Co.	7-29-24	7,000	cleaning out
Milham Expl. Co., No. 12 Buttonwillow, Kern Co.	7-28-23	2,490	cemented
Purman, T. H., No. 1 McKittrick, Kern Co.	22-29-21	3,890	sd. sh. drilling
Welport Oil Co., No. 8 McKittrick, Kern Co.	26-29-21	1,298	cleaning out
Federal Drlg. Co., No. 1 Buena Vista, Kern Co.	20-31-24	5,380	suspended
General Pet., No. 1 Belridge, Kern Co.	30-28-21	8,260	suspended
Wallace, K. C., No. 1 Belridge, Kern Co.	32-29-21	4,222	suspended
Rio Cal Pet., No. 1 Shale, Kern Co.	2-27-18	2,355	suspended
Wicker, Sy., No. 1 Arvin, Kern Co.	12-30-28	3,850	suspended
Fullerton Oil Co., No. 4 Semitropic, Kern Co.	9-28-24	2,601	abandoned
Fullerton Oil Co., No. 5 Semitropic, Kern Co.	9-28-24	rig	rigging up
Cumberland Oil Co., No. 2 Devils Den, Kern Co.	17-26-18	3,225	suspended
Taylor, R. W., No. 1 Devils Den, Kern Co.	29-25-19	mtl.	building rig
Totem Oil Co., No. 1 Devils Den, Kern Co.	29-25-19	rig	suspended
Pasadena Oil Co., No. 1 Blackwell Corner, Kern Co.	15-26-19	106	rig cable tools
Regina Oil Corp., No. 1 Mojave, Kern Co.	26-10-14	2,784	sd. sh. drilling
Meridian Oil Co., No. 1 Mojave, Kern Co.	11- 9-15	4,000	suspended
Harding, J. B., No. 1 Mojave, Kern Co.	5-10-10	1,030	redrilling
Barnsdall Oil Co., No. 1 Tejon, Kern Co.	15-11-20	5,073	cleaning out
Ritchie, J. J., No. 1 Tejon, Kern Co.	33-11-19	6,025	suspended
Descanso Oil Co., No. 1 Tejon, Kern Co.	31-11-19	2,749	suspended
Associated, No. 1 Jacalitos, Fresno Co.	22-21-15	6,197	suspended
Kingsburg Expl. Co., No. 1 Kingsburg, Fresno Co.	30-16-23	2,430	suspended
Kent & McDonald, No. 1 Carrizo Plains, San Luis Obispo	3-32-22	2,630	redrilling
Emeric Oil Co., No. 1 Carrizo Plains, San Luis Obispo Co.	22-32-22	mtl.	building rig
Trav-El Oil Co., No. 1 Carrizo Plains, San Luis Obispo Co.	7-32-22	2,450	cleaning out
Indian Dome Oil Co., No. 1 Edna, San Luis Obispo Co.	26-31-12	3,352	redrilling
Martin, J. D., No. 1 Edna, San Luis Obispo Co.	5-31-13	3,070	cleaning out
Paso Robles Oil Co., No. 1 Edna, San Luis Obispo Co.	27-27-11	4,191	cleaning out
Emerich Oil Co., No. 1 Atascadero, San Luis Obispo Co.	13-28-12	1,971	hd. sd. drilling
Schilling, C., No. 1 Atascadero, San Luis Obispo Co.	1-29-12	1,650	suspended
Pacific Inland, well No. 1, Monterey Co.	19-23-15	2,339	redrilling
Brown, W. F., No. 1 Parkfield, Monterey Co.	15-23-14	1,051	suspended
Juess, E. B., No. 1 Corcoran, Kings Co.	7-21-21	6,197	suspended
Owens Bros., No. 1 Dudley Ridge, Kings Co.	32-22-20	rig	rigging up
Kettleman Nat. Gas Co., No. 1 Dudley Ridge, Kings Co.	18-22-19	1,100	suspended
Irma Investment Co., No. 2 Dudley Ridge, Kings Co.	7-23-20	1,224	testing
Eagle Oil Co., No. 1 Dudley Ridge, Kings Co.	15-23-20	1,125	suspended
Eagle Oil Co., No. 2 Dudley Ridge, Kings Co.	15-23-20	rig	rigging up
Valley Expl. Co., No. 1 Dudley Ridge, Kings Co.	12-23-19	1,302	suspended
Knudsen & Schmidt, No. 1 Reef Ridge, Kings Co.	36-23-17	5,894	cleaning out
Seymour, L. W., No. 1 Avenal, Kings Co.	10-23-16	1,148	testing
Magee & Stone, No. 1 Alpaugh, Kings Co.	34-24-22	3,550	gr. sd. drilling
Tulaco Oil Co., No. 1 Corcoran, Tulare Co.	20-22-22	rig	suspended
Ducor Pet. Co., No. 1 Ducor, Tulare Co.	14-24-27	2,200	redrilling
Inland Valley Oil Co., No. 1 Visalia, Tulare Co.	24-17-24	2,092	suspended
Gravity Expl. Co., No. 1 Alpaugh, Tulare Co.	11-24-23	1,004	sd. sh. drilling
Ellis & Sanford, No. 1 Tulare Lake, Tulare Co.	20-24-23	1,920	suspended
Twin State Oil Co., No. 1 Point Arena, Mendocino Co.	14-12-17	7,694	suspended
Napa Oil Co., No. 1 Griffith, Napa Co.	7- 8- 3	2,848	cleaning out
Orinda Pet., well No. 1, Contra Costa Co.	32- 1- 3	2,120	suspended
Colusa Oil Co., No. 1 Bush, Colusa Co.	31-15- 4	1,040	suspended
Oakdale Oil Co., No. 1 Oakdale, Stanislaus Co.	3- 2-10	4,750	suspended
Hilderbrandt, R., No. 1 Crows Landing, Stanislaus Co.	36- 6- 7	1,130	suspended
Rushing Oil Co., No. 1 Waterford, Stanislaus Co.	20- 3-13	2,380	sd. sh. drilling
Orland Oil Synd., No. 1 Orland, Tehama Co.	31-23- 3	3,040	suspended
Pacific Northern Oil Co., No. 1 Guinda, Yolo Co.	23-12- 3	2,005	cleaning out
Easton & Monell, No. 1 Colma, San Mateo Co.	25- 3- 6	3,104	sd. sh. drilling

Good Gas Producer in Indiana Field

One Gauges 16,000,000 Feet Initial and Another 7,000,000 Feet. Eleven Completions in Central Ohio. Kentucky Operations Slow

By George A. Whitney
Staff Correspondent, Central West Fields

FINDLAY, Ohio, Apr. 11.—There are several wells under way in the Lima Field nearing the pay sand and well scattered over the big producing territory. In Seneca County, Hopewell Township, J. H. Murphy & Sons are getting close to the Trenton formation on the Ray Knepper farm, Section 11, as well as in their No. 1 on the Fay E. Sparks farm, same section.

In Liberty Township, L. Curry's test on the Lloyd Hoover, Section 34, is also nearing pay sand. West of Toledo, in Monclova Township, Lucas County, John Doblinger has two wells under way that should be completed within a short time, barring bad luck. They are both tests on the Knauss and Solomon S. Betts farm, Section 8.

Commonwealth Gas Corp. is drilling No. 4 Arthur W. Kritzler, Section 12, Cessna Township, Hardin County. Simms Oil Co. is drilling a wildcat on the Bernice B. Porter farm, Lot 9,974, Rush Creek Township, Logan County.

In Wyandot County, McPheron and others' are getting close to the Trenton formation in No. 5 on the Bowman-Brillhart, Section 21, Tymochtee Township, and are also drilling on the Howard Walton, Section 10, Crane Township, same county. Part of Wyandot County has no pipe line to handle the crude, and an average of 300 bbls. a day of oil is being moved out of the Tymochtee Pool, south of McCutchenville, by motor trucks to Carey, Ohio, where it is put into the lines of the Buckeye Pipe Line Co. An increase in the oil moved is expected as more favorable weather permits access to wells. M. R. McPheron, Lima, Ohio, operator, and a group of Sycamore, Ohio, associates, who own four wells on the Bowman-Brillhart farm, have constructed a pipe line from the wells to Tymochtee Hill where oil can be pumped into tank trucks on the highway.

R. W. Kirk and others are getting close to producing sand in their second test on the Elmer E. Moser farm, Section 12, Ridge Township, Wyandot County. Harpster and others have a rig still idle on the L. C. Beis farm, Section 11, Crawford Township, same county.

Lee Booth is drilling on the A. and J. Breymaier farm, Section 7, Mississinewa Township, Darke County.

INDIANA

A remarkably fine gas producer is credited to the Indiana Field, the Wabash Public Service Co.'s well, 1,120 feet from the south line and 230 feet from the west line of the G. B. Allen farm, NE Section 22, Columbia Township, Gibson County, which showed an initial volume of 7,000,000 feet, the largest gas producer found in the state for a long period. Knox Engineering Co. completed No. 1 Charles C. Steele, NE NE Section 22, same township, which gauged 16,000,000 feet initial. Same company has made locations for No. 1 Sims, No. 1 Kirk and No. 1 Gudgel. Two wells are almost due for completion in Washington Township, same county, being the Gib Van Oil Co.'s No. 5 Agnes Haskins, SE Section 18, and the Big Four Oil & Gas Co.'s No. 3 Lottie Hope, SE same section.

P. C. Andrews is drilling No. 11 E. Loveless farm, Section 23, Logan Township. Pike County, and the Cato Gas & Oil Corp. is drilling No. 3 Everette Crow, Section 25, Patoka Township, same county.

The Illinois Field failed to report any new completions during the week as most of the wells are shut down.

CENTRAL OHIO

During the past week a total of 11 wells were completed in the Central Ohio Field, of which four were producers with an initial of 68 bbls., four gas wells and three dry holes, scattered over seven counties.

In Ashland County, Jackson Township, the Ohio Fuel Gas Co. has a light gas well in No. 1-5,638 C. R. Keener farm. Eddy and others are still shut down at their No. 4 Edward Gardner farm, Section 17, Perry Township.

In Lorain County, McMilland and others have a rig on the William M. Klooz, Lot 71, Columbia Township, and Ramage and Willis are drilling No. 3 Frederick Armbruster, Lot 72, Grafton Township.

In Medina County, Chatham Township, the Edson Sons Co. found a dry hole in No. 38 Marcus A. Frank farm, Section 26, no Berea sand being found. Barnhart and others also found a dry hole in No. 8 on the Joseph Funk farm, in Harrisville Township, same county, in the Berea sand from 363 to 381 feet.

In Richland County, the Commonwealth Gas Corp.'s test on the Angeline Cates farm, Section 11, Jefferson Township, which found a very light volume of gas in the Clinton lime formation from 2,449-51 feet, has been abandoned as dry.

In Knox County, Howard Township, H. E. Perkins is drilling on the H. L. Simpson, Lot 28. In Summitt County the East Ohio Gas Co. is drilling deeper its No. 2 on the F. S. Keifer farm, Section 18, Greeb Township.

In Licking County, Fallsburg Township, the Emerald Petroleum Co.'s second test on the Sidney Tarlton farm, Section 9, is in the Clinton from 2,818-69 feet. Settles Oil Co.'s No. 5 Nellie Smith farm, Section 17, Perry Township, is reported for 4 bbls. initially from 601 to 609 feet.

In Muskingum County, Union Township, the Atha Co.'s test on the Jacob S. Morrison farm, Section 15, produced 15 bbls. the first 24 hours from the Niagara lime formation from 2,963 to 3,065 feet.

Stark County

In Stark County drilling activity continues, owing to the heavy gas volume found in some of the wells. The Ohio Fuel Gas Co. has a new gas well in No. 1 James H. Friedman farm, Section 16, Jackson Township, and the East Ohio Gas Co. struck a gas producer in No. 3 Howard B. Fawcett, Section 17, same township. White & Bacon are drilling No. 2 Bessie Slagel, Section 14, same township. Ohio Fuel Gas Co. made a location on the Marchand property.

In Guernsey County, Cambridge Township, Jewell and others' test on the Charles H. Scott farm, Section 1, does not look very interesting in the Berea sand, which was topped at 1,320 feet, with an oil showing from 1,320-29 and at a total depth of 1,336 feet; the well doing only a half barrel, has been shut down for a test, and probably will be given a light shot.

(Continued on Page 44)

New Tests in Washington County, O.

First Well Maintains Production Through Intermittent Flows. Two Oil Wells in Southeast Ohio, Four Gassers in West Virginia

By Staff Correspondent

PITTSBURGH, Pa., Apr. 11.—Joseph Swingle and his associates are drilling at 2,650 feet with a drilling machine in their well on the Edwards farm at the mouth of Dana's Run below Newport in the new pool in southeast Washington County, Ohio. Geologists report that the Third Warren sand may be found at a depth of 2,950 feet, and it is to this formation that this well is slated to go. No rig was erected.

The Crago farm test belonging to William Harris and others, on the head waters of Cady Run in Grandview Township, Washington County, and the first well in this new pool, continues to maintain an average daily production of about 60 bbls. through intermittent flows. Cleaning-out operations, preparatory to casing off the open Injun, Squaw and Berea sands continue, and a slight caving of the hole has caused some trouble.

The discussion aroused by the interest in the Crago well brought to light the fact that about 20 years ago a test was drilled in Grandview Township, Washington County, along the bank of the Ohio River. This well was drilled to a depth equal to what is now known as the Third Warren sand. It was recalled that this well produced about 20 bbls. a day for a considerable period. However, water from a spring freshet entered the well outside the casing, collapsing it and destroying the well and it was abandoned. It is said that the roadbed of Ohio Route No. 7 covers the exact location of this interesting forerunner of the wells in the new pool.

Reports on the activity in this region state that Benedum & Trees, Pittsburgh operators, are moving in an outfit to drill on the E. E. Knowlton farm, and likewise one on the McKnight tract. John Buckley is preparing to test the Pryor tract, and Blackburn Brothers are rigging up for their test on the Semler property.

The Southeast Ohio division of the Eastern Fields reported two producers with a total initial production of 11 bbls. as the result of the past week's work, and the West Virginia division reported four gassers and one dry hole. Southwest Pennsylvania had no completions to report.

SOUTHEAST OHIO

In Licking County, F. B. Settles completed his No. 5 well on the G. W. Smith heirs' property in Section 18, Perry Township, after drilling to a depth of 700 feet and in the Berea sand. This well had a natural production of 1 bbl. for the first 24 hours, but after shot its production reached 5 bbls. for a day. It will probably make a 2½-bbl. pumper.

The Oko Oil & Gas Co. has a 6-bbl. producer in its No. 54 well, located on the Henry Essig farm on Lot No. 3, Section 13, Chatham Township, Medina County. This well was completed at a depth of 400 feet.

Drilling in Southeast Ohio

McClay Brothers are drilling their test on the Jacob Lothes heirs' farm in Section 7, Perry Township, Licking County, to the Clinton sand, and have reached a depth of 1,800 feet.

E. R. Edson & Son Co. is drilling No. 19 on the W. A. Shaw property on Lot No. 5, Chatham Township, Medina County, and in the same township but on Lot No. 3, the Oko Oil & Gas Co. has started drilling in No. 55 on the Henry Essig farm.

In Harrisville Township, Medina County, F. Barnhart and others have reached a depth of 250 feet in their No. 6 on the J. W. Funk farm on Lot No. 6.

WEST VIRGINIA

The Pure Oil Co. has a gasser good for close to 1,000,000 feet in its No. 56 on the Federal Coal Co. tract in Sherman district, Boone County. This well was drilled to 2,249 feet and in the Big Lime and Weir sands. This was the best well completed in the West Virginia division during the past week.

In Chapmansville district, Logan County, the Cumberland Petroleum Co. completed a light gasser in its No. 5 on the Merrill Coal Co. tract at a depth of 1,247 feet. H. H. Allen has an Injun sand gasser in his test on the J. P. Allen farm in Murphy district, Ritchie County. This well, a light gasser, was completed at 1,950 feet, and with no showing of oil during the process of drilling.

Meabohn and Huffman drilled their old test on the Mary E. Pratt farm deeper to 2,815 feet where they have a light gasser. The Pratt farm is in Stonewall district, Wayne County. After drilling through the Bayard sand and to 3,510 feet, the West Penn Gas Corp. found it did not have enough gas to test on the Charlie Taylor farm in Battelle district, Monongalia County. The West Penn Gas Corp. was drilling this test deeper.

South Penn Oil Co. shot its No. 4 on the B. F. Weaver farm in Dekalb district, Gilmer County, and after cleaned out it was found the shot had increased the production from 1 to 2 bbls. a day.

In Ritchie County, W. H. Bickle drilled his test on the U. S. Fluharty farm in Murphy district, to 1,907 feet where it awaits a test. The Cecelia Oil & Gas Co. has 13 wells on the Croft Land Co. tract in Scott district, Boone County, awaiting tests. They are No. 7 standing at 2,405 feet, No. 8 at 2,584 feet and No. 9 at 2,599 feet.

Drilling in West Virginia

The Parsner Gas Co. is drilling at 1,900 feet on the A. and E. Elkins farm in Jefferson district, Lincoln County, but shut down for repairs at present. The test of the Turtle Lick Gas Co. on the J. F. Johnson property in the same district, is drilling at 300 feet, while H. H. Dial has his test on the Claude Peyton farm in Sheridan district down to a depth of 2,430 feet. In Union district, the second test on the Roy and Hal Adkins farm belonging to the Vernon Gas Co. has reached 900 feet.

In Sheridan district, Lincoln County, the Kanawha Gas & Utilities Co. has made locations on the Byron Johnson and for a second test on the Nona Johnson, and in Carroll district, the same operator has made a location for No. 3 on the W. W. Carroll farm. Hamilton Natural Gas Co. has made location on the Jink Miller farm in Jefferson district, and the Cam-

bridge Gas Co. is skidding a rig for a second test on the A. M. Mullens property.

In Warfield distirct, Mingo County, the United Fuel Gas Co. is drilling at a depth of 3,866 feet in No. 4,329 well on the Central Trust Co. tract, and in Hardee district, the same operator has reached 4,593 feet in No. 4,331, located on the Cotiga Development Co. tract.

The Manufacturers Light & Heat Co. has rigs standing to drill deeper its No. 1,572 and No. 3,300, located respectively on the D. W. Stewart farm in Church district and the W. P. Hubbard farm in Clay district, Wetzel County. Ray Hennen and others have a rig standing on the Jesse Parson farm in Proctor district of the same county.

In Boone County, the second test of the Cambridge Gas Co. on the C. C. Lewis heirs' property in Scott district, is down for repairs at a depth of 1,350 feet, as is the Hill Gas Co. in its second test on the J. Albert Covert farm in Washington distirct. This well has been drilled to 793 feet. C. P. Jones is spudding in and has reached 90 feet on the G. T. Hill property in Washington district.

The Owens-Illinois Glass Co. has a rig standing for No. 7 well on the Broun-Cochran tract in Peytonia district, Boone County. The same operator has the rigs and tools ready for No. 21 on the Cassingham and others property in Scott district, and a second test on the S. M. Wheeler farm in the same district, and No. 13 on the Little Coal Land Co. tract in Washington district. The Pure Oil Co. has made a location for No. 42 on the L.R.&P. Tract "A" in Sherman district, and has a rig standing for No. 256 on the Williams Coal Co. tract in the same district.

Godfrey L. Cabot has made a location for No. 6 on the Mary Dickinson farm in this district, and has a rig standing for No. 46 on the Federal Coal Co. tract. Owens-Illinois Glass Co. is ready with a rig for No. 20 and with rig and tools for No. 21 on the Peytonia Coal Land Co. tract in the same district.

In Lewis County, W. C. Turner has a rig standing on the John Brown farm in Court House district.

SOUTHWEST PENNSYLVANIA

The Southwest Pennsylvania division of the Eastern Fields failed to report a single completion as the result of the past week's work.

In Greene County, D. L. Shafer & Co. remain shut down in their test on the William Jones farm in Wayne Township, and at a depth of 850 feet. In North Fayette Township, Allegheny County, Schaffer & Co. has a rig standing for No. 3 well on the Henry Schaffer farm.

R. G. Clark & Co. is rigging up on the R. G. Clark farm in Cromwell Township, Washington County, as is Willard Iams & Co. on the Willard Iams property in the same township. The Iams farm well is also a test operation. Raymond Oril & Co. has a test standing at 1,900 feet on the M. Hazlett farm in the same township.

CENTRAL WEST FIELDS

(Continued from Page 43)

In Belmont County, Kirkwood Township, Bradfield and others have a rig on the Margaret Campbell farm, Section 2.

The Ohio Fuel Gas Co.'s No. 2-5,637 Carrie Staker farm, Sections 3 and 10, Brush Creek Township, Muskingum County, is reported dry in the Clinton lime from 3,933-83 feet. Fritz Oil & Gas Co.'s second test on the Edward Middleton farm, Section 10, same township, is down 4,350 feet and still drilling. No gas was found at 31 feet in the Clinton. Water was found below in this well and an attempt will be made to shut off the brine.

In Meigs County, Joe Rubin and others found a light gas well on the E. G. Harper farm, Section 27, Salisbury Township, in the Maxon sand at 863 feet. Grover Clayton and others' test on the Lois Katzminger and others farm, Section 33, Rutland Township, same county, is a dry hole at 716 feet. Barton & Utsinger are rigging up to drill deeper on the J. C. King farm, Section 8, same township. E. Calderwood is rigging up to drill deeper a second test on the T. M. Nesse and others farm, Section 25, Sutton Township, same county. Vulcan Gas Co. is drilling around 600 feet at No. 4 H. F. Johnson farm, Section 35, Salisbury Township.

KENTUCKY

Development work over Kentucky has taken a heavy fall, especially in Hart and other adjoining counties due to the low price of crude, as the operators there are wanting Mid-Continent prices, and have agreed to shut down field work unless it is granted. Since the meeting of operators in Hart County, the operators have been successful in getting a 15-cents-per-barrel increase from the Producers Pipe Line Co., bringing the crude price for the county to 75 cents a barrel at the wells, announced by Frank Wilson, manager of the Producers line. This advance may bring about a renewal of operations. The Stoll Oil Refining Co., Louisville, also increased its price on Hart County crude to 75 cents, the new price being effective April 1. According to advice from the Owensboro Field the price of western Kentucky crude remains at 90 cents a barrel.

Three completions were reported from the Owensboro Field the past week. James C. Ellis and others drilled a dry hole on the Pate Lyons farm, in the Pellville area of Hancock County. Sand Petroleum Co. is drilling No. 1 Jeff Williamson, same county, and D. J. White, Inc., is drilling on the Lafe Payne 217 acres, same county. James C. Ellis and others expect to start a second test on the Pate Lyons farm.

In Ohio County the Bader Oil Co., Inc., and J. Thomas, struck a 10-bbl. pumper in No. 2 well, 400 feet from the south line and 600 feet from the west line of the Oston Ramsey farm, 3 miles southeast of Whitesville, at a depth of 502 feet. Cumberland Petroleum Co.'s No. 3 in the southwest corner of the A. E. McCarty 85 acres, in the Friendship Pool, same county, was dry at 368 feet. Ellis Carpenter and others are drilling No. 2 Lucille Taylor, near Adaburg.

CANADIAN FIELDS

(Continued from Page 39)

Donald, Vancouver; Alex Hannah, T. E. Burns, Calgary.

Twin River Test

In the border fields, Parco Oil Co.'s No. 1, LSD 16, Section 34-1-20w4, on the Twin River structure southeast of Lethbridge, will make a pumping test of the 30-foot sand around 3,890 feet. Production before the recent shot was steady at about 10 bbls. a day, and it is thought the shot may have improved this.

Gasser at Brooks

In the vicinity of Brooks, Canadian Western Natural Gas Co.'s No. 5, Section 33-18-14w4, is reported a small gasser.

Red Coulee Field

In the Montana end of the field, Cosmos Petroleum Co.'s new producer in Section 2-37-4w, is reported to have gauged 95 bbls. a day on the first 24-hour test and 60 bbls. the second day. A settled production around 40 bbls. a day is likely. Askalta Oils' No. 3 is reported held up by bad road conditions.

Peace River Prospects

A prospective test for gas by A. W. Bletcher and associates of Lethbridge, who have secured a natural gas franchise for Peace River and will this spring start drilling close to the town, has revived local and outside interests in the oil possibilities of the area north of the town.

The most recent test, drilled by the Victory Oil Co. just across the river from the Peace River townsite, reported showings at 1,114 and 1,185 feet with shows of high grade oil and wet gas at 1,552 feet. H. L. Williams and associates of Edmonton, drilling at Three Creeks, are reported to have got past the heavy water vein into the lower Devonian, getting a small show of light crude.

The shallow oil, around 960 feet, was a heavy asphaltic crude, and while a small commercial production, 5 to 20 bbls., was reported in some of the wells, no attempt seems to have been made to put any of them on the pump, though the possibility of getting commercial results by operating a string of shallow wells with a central pumping plant was mooted. The underlying water was the great difficulty. One of the later tests by Peace River Petroleum Co. shot a flow of black salt and sulphur water 90 feet into the air. The well is still gushing salt water in enormous quantities.

While the field is apparently monoclinal, it is thought possible that drilling farther back from the river may encounter better conditions, and that local structures may have retained crude oil in commercial quantities. The Bletcher Syndicate's test for gas will be drilled close to Peace River. The earlier drilling indicated three gas horizons within 800 feet.

SOUTHWEST TEXAS FIELDS

(Continued from Page 37)

general line, on the supposition that there are parallel structures located southeast of the Salt Flats and Darst Creek Fields.

Northeast of the old Luling Field and between the Branyon and Dale Fields, C. J. Webster Oil & Gas Co.'s No. 1 McCrory in the east end of the John A. Neill Survey, has had some encouragement and is worth close watching. First thought to be running low, it later developed less than normal chalk and now, in the Buda, is showing a little oil and has a chance. Last depth is 2,128 feet.

There is some new activity also in Bastrop and Travis Counties. Fritz Fuch is starting another test in the L. Kimbro Survey in northeastern Travis hunting for a Serpentine plug. Auld is going to drill a well near Cedar Creek in southwestern Bastrop, and Schimmel has already started a test in the same district on the Trigg ranch. Champion has another test east of Elgin in the northern part of the county and Marts is drilling on a test north of Elgin.

West of San Antonio along the Balcones fault, operations have been at a standstill for weeks but Robertson Drilling Co. of Fort Worth has spudded in on the Little farm in southern Medina County a few hundred feet from the center of the south line of the county and other operators are blocking between that and Devine on the east.

Pettus District

Pettus Oil & Gas Co. (Henderson Coquat) over the week-end was working with No. 1 Mauldin which had shown considerable oil at 3,886 feet, located between the extension pool on the west and the Pettus townsite production on the east. It is watched with interest because it was thought at one time that the territory was practically condemned before the extension pool was brought in.

Also J. L. Mauldin is starting a test one location from the Grayburg Oil Co.'s No. 1-A Kimball in the S. Winship Survey, 7 miles west of the Pettus Field. Grayburg got quite a showing of oil during the early days of the Pettus Field, lost the hole and drilled the No. 1-A Kimball but was never able to finish it into a well though it made considerable oil. Some other tests were drilled around by others but failed to bring in a pool. Mauldin is giving it another trial. Grayburg has no interest in the new test.

Coast Counties

The big feature of the coast counties is the Stanolind Oil & Gas Co. and John R. Camp's No. 1 King in Nueces County which tested for a good gas well and set casing late in the week. Due to the custom in the coast counties of giving the cement plenty of time to set it will probably be late this week at the best before the test is made. Corrected depth on the test when casing was set is 3,899 feet with sand topped at 3,893 feet. This test is about 5 miles northwest of the Agua Dulce gas field in western Nueces County, the gas production coming from 2,000 feet with two wells a mile east of the field producing at around 4,800 feet. The No. 1 King therefore seems to open something new both as to production and sand depth.

In the northern part of San Patricio County in the Aransas Pool, Atlantic Oil Producing Co. and Welder Oil Corp. started cleaning out the No. 3 Welder last week preparatory to deepening it to around 6,000 feet and it will be an interesting and important test. Located on a big block between that and the town of Aransas Pass. Mid-States Oil & Gas Co. is getting ready to start a deep test.

In the Saxet Field, Houston Oil Co.'s No. 1 McGregor, which extended the field a mile to the north was last reported making about 200 bbls. per day by heads. By experimenting with bottom hole chokes the company may be able to make it do better than that. It is understood Gulf Coast Oil Co. is to make another location on its Sedwick lease to the north and in the direction of the Houston Oil Co.'s No. 1 McGregor and try to pick up the same sand.

In northeastern McMullen County over the week-end Jacob, Buzzini and Pickett were bailing in the No. 2 Jacobs with the prospect that they might open up a new oil shallow field in sand at 948-62 feet. It had not been completed as this was written.

Starr County

Operations in Starr County center now around the wildcats that are being started because of the bringing in of Heard & Heard's No. 1 Johnson, a mile northeast of Rio Grande City and 6 miles southwest of the Los Olmos shallow field. Several new operators are now in the field. Harry W. Powers is rounding up some Fort Worth spudders to drill in the shallow field. Tom Patton will drill a deep test on Hooks & Weaver lease in the shallow field agreeing to take no production at 1,000 feet or less, the production in the field being now at around 500 feet.

R. H. Pursley got a dry hole west of the field at 472 feet but is about to carry it on down for deeper production and Los Olmos Oil & Gas Co. which brought in the discovery well in the shallow field is starting a deep test half way between the field and Rio Grande City.

LA.-ARK. FIELDS

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7-11, tested dry at 2,644 feet on their No. 1 Williams.

MISSISSIPPI

The Jackson gas field in Mississippi reported two more good gassers to sum up the week's total of six completions. In Rankin County, Atkinson & Dyer's No. 1 Valentour, Section 18-5n-2e, had an estimated initial flow of 30,000,000 feet of gas with a small spray of salt water from 2,486 feet. The new well is the farthest southeast producer of the Rankin area and is a one-fourth mile extension of the proven area in that direction. In the same county, to the north, Baker and others' No. 1 Rankinside Development Co., Section 6-5n-2e, gauged 46,937,000 feet from a total depth of 2,366 feet. The well extends the producing area of this section of the field one-half mile northeast. In the Hinds County area, Belhaven College has set 6-inch casing at 2,390 feet on its No. 1 fee, Section 35-6n-1e.

Only two wildcats are active in Mississippi at the present time. The Mississippi-Minnesota Oil Co.'s No. 1 Edwards Land Co., Section 23-6n-4w, is drilling at 2,190 feet. This test is in the western part of Hinds County near the Warren County line between the cities of Vicksburg and Jackson. In Sharkey County, the United Gas Public Service Co. is drilling at 2,304 feet in its No. 1 Lenhart, Section 14-14n-6w. Operations on this test have been hampered and set back during the last few weeks because of high water. The wildcat is located on a large block consisting of over 60,000 acres with encouraging reports from a geophysical survey.

EAST TEXAS BORDER

In Shelby County, East Texas, near the recently discovered shallow production, Fuller and O'Brien Brothers are

nearing the pay horizon on their No. 1 Frost Lumber Co., Aaron Castleberry Survey. The test is drilling at 1,400 feet, and comparing the subsea depth with the pay depth of the Oil News' No. 1 Pickering, has yet 16 feet to go to reach the same level as the oil sand in the discovery well. The section is being closely watched and several other tests are rigging up to drill in the vicinity. The Oil News' well, although the operators have not officially completed the test, is pumping about 50 bbls. daily with a quantity of salt water. It has not been determined yet whether the water is coming from the bottom of the hole or from sand in the Midway through faulty casing.

Other active tests in East Texas border counties are as follows: Cass County, William S. King's No. 1 Richey, Levonie Morven Survey, drilling in chalk at 2,138 feet; Harrison County, Gochee and others' No. 1 T. W. Davidson, R. W. Starr Survey, set 10-inch at 105 feet, drilling at 550 feet; Marison County, Baunoch Development Co.'s No. 1 Miller, H. Fulgram Survey, reaming at 3,346 feet; Panola County, United Production Co.'s No. 12 Werner, B. C. Jordan Survey, set 7-inch casing at 2,784 feet with the bottom of the hole at 2,912 feet. The latter test will go to the Oolitic lime gas production in the upper Trinity horizon.

ARKANSAS

Drilling activity in Arkansas is showing a tendency to pick up during the past few weeks. In Loanoke County, Frank Melat and others are drilling at 2,206 feet on their No. 2 Fletcher in Section 13-1-8. Most of the operations in this State are confined to Union County as follows: Drillers Oil & Development Co.'s No. 1 Haynie, Section 1-17-16, tested salt water with a show of oil from 2,135-38 feet. The test then cored oil sand from 2,138-45 feet and arrangements are being made to set a short string of 4½-inch casing at 2,138 feet for a test. H. H. Helms' No. 1 Berry Davis, Section 31-16-14, tested dry at 2,450 feet, cored salt water sand at 2,762 feet and is now drilling in sandy lime at 2,875 feet.

The deep test of the Lion Oil Refining Co. in the Smackover Field, No. 9-A Hayes, Section 4-16-15, continues to experience difficulties. The drill stem has been stuck for some time in rock salt at the total depth of 7,255 feet, and was twisted off during the past week about 2,500 feet from the top. It is not known at this time whether the operators will whipstock and attempt to drill deeper or abandon the test. In the Urbana Field, Wilson & Chapman's No. 1 Parker, Section 3-18-13, cored a broken sand formation from 3,563-81 feet, and 6⅝-inch casing is being set at 3,560 feet for a test.

Daily Average Runs

The fields of North Louisiana and Arkansas registered a decline of 85 bbls. in the daily average runs during the week, the former decreasing 180 bbls. while the latter had an increase of 95 bbls. daily. The daily average runs from the several pools were:

NORTH LOUISIANA	
Caddo, light	5,575
Caddo, heavy	2,080
Cotton Valley	545
DeSoto-Red River	2,015
Elm Grove	295
Haynesville	4,470
Holly	320
Homer	3,885
Pleasant Hill	300
Sarepta-Carterville	830
Urania	3,035
Zwolle	5,820
Total North Louisiana	28,170
Total previous week	28,350
Decrease	180

ARKANSAS	
Champagnolle	1,875
El Dorado	3,135
Lisbon	535
Nevada	1,240
Smackover, light	2,915
Smackover, heavy	23,690
Stephens	645
Urbana	960
Total Arkansas	34,995
Total previous week	34,900
Increase	95
Total both states	63,165
Total previous week	63,250
Decrease	85

OKLAHOMA FIELDS

(Continued from Page 33)

may have been heretofore determined as being ratable production permitted by any producer or which may hereafter be determined to be the ratable quantity which may be legally produced without waste.

The Wilcox Oil & Gas Co. owns or has an interest in 10 wells in the Wilcox sand zone in the Oklahoma City Field, the wells having a combined adjusted potential of 79,434 bbls. daily and for February had an allowable for the month of 20,000 bbls. During March the company's pipe line handled 42,340 bbls. of crude, some of which was purchased from other companies.

Oklahoma City Shipments

Oil shipments from the Oklahoma City Field during the month of March totaled 3,192,524 bbls. compared to 2,624,686 bbls. for the month of February. Crude oil stocks on leases were reduced to tank bottoms, and the field started the month with very little underproduction. The total shipments by companies were as follows:

Company—	Bbls.
Champlin	30,494
Continental	83,569
Empire	550,821
Globe	239,382
Magnolia	179,291
Oklahoma	513,561
Operators	38,751
Prairie	29,451
Shell	332,149
Sinclair	326,695
Stanolind	648,403
Tidal	9,712
Wilcox	42,320
Anderson-Prichard	435
Canadian	7,681
Capitol	2,131
Century	42,517
I. T. I. O.	200
Peacock	15,118
Petroleum	55,326
Salem	25,808
White Oak	13,825
Major Petroleum	4,974
Total	3,192,524

Greater Seminole Area

The area surrounding the Conservation Pool, in Pontotoc County, is active and new producers are being completed each week. During the week the Dickson Oil Corp.'s No. 1 Jackson, SW cor. Section 16-5-6, in the Conservation Pool, cemented casing at 1,640 feet after finding sand at 1,642-60 feet. The test is offset by two other wells averaging around 175 bbls. daily. It will be completed during the next few days.

Freeborn Oil Co.'s No. 1 Brown, SE cor. NE NE Section 28-5-6, had sand at 1,604-08 feet with a showing of oil and another oil sand at 1,656-96 feet, where it flowed 20 bbls. of oil and 1,000,000 feet of gas a day. It found another sand at 1,721-35 feet and the well swabbed 195 bbls. the first 24 hours.

Westheimer & Daube's No. 6 Milner, C S half SE SE Section 8-5-8, in the old Allem area, Seminole County, found a shallow sand at 818-30 feet, where it pumped 22 bbls. of oil after a shot.

Stanolind Oil & Gas Co.'s No. 2 Burke, SE cor. SW NE Section 32-5-5, in the Beebe area of Pontotoc County, found the Viola lime at 2,259 feet and the Simpson at 2,411-18 feet with 600 feet of oil in the hole.

In the Fish Pool, in eastern Seminole County, Empire Oil & Refining Co. announced three new operations, No. 4 B. Fish, SW cor. NE SE Section 19-7-8; No. 1 B. Davis, NW cor. SE NE Section 30-7-8, and No. 1 Campbell, NW cor. SW SW Section 20-7-8. The Texas Company's No. 2 Eliza, in Section 19-7-8, was making 100 bbls. an hour from the Wapanucka at 3,018-3,105 feet.

Carter Oil Co.'s No. 1 Monett, SW cor. Section 35-7-4, a wildcat well in the southern part of the new Sacred Heart Pool, in Pottawatomie County, was given a potential of 1,385 bbls. of oil on a 10-day potential test. The well is permitted to produce 44 per cent of its potential production.

Only three of the offsets to the discovery well in the new Monett area will be drilled at the present time under an agreement by operators. The wells in this area will be permitted to produce on the same basis as other wells in the Greater Seminole area. The well was shut down for 60 days by agreement.

Sinclair-Prairie Oil Co.'s No. 1 Foster, SE cor. NW NW, Section 1-8-6, in the north end of the Bowlegs Pool, in Seminole County, cemented casing at 4,030 feet, the total depth. The top of the Viola lime was found at 4,022 feet. Same company's No. 1 Maxey, NE cor. SW NW, Section 1-8-6, made 495 bbls. on the air-gas lift in 24 hours.

The second test in the new area in the northeastern part of Okfuskee County, found a showing of oil. The test is J. H. Rebold Oil Co.'s No. 1 Rossiter, SE cor. SE NW NE, Section 1-12-13, found a showing of oil in the Wilcox sand at 2,697 feet and it was drilling into the pay at 2,701 feet. Tanks were erected and the lines laid. The top of the Viola lime was found at 2,650 feet and the Simpson at 2,684 feet. It is the second test to find the Wilcox sand in this area which was opened by W. B. Pine's No. 1 Bradford, located across 10 acres to the northeast.

Other tests in the area include Jake Rutz Oil Co.'s No. 1 Davis, NE cor. SE NW, Section 1-12-13, and Wigton & Long's No. 1 in the NE cor. SE SE, Section 25-13-13, Okmulgee County, two locations north of the discovery well.

Turkey Mountain in Okmulgee

Another interesting well in vicinity which opened a new producing horizon is Fred Cusack's No. 1-A Schadt, NE cor. SE SW, Section 15-13-14, Okmulgee County, a former Wilcox sand producing well drilled deeper to the Turkey Mountain sand. It was swabbed four hours and made 50 bbls. of oil and later filled up 900 feet with oil after the swabbing test. There is 125 feet of open hole, and cavings had to be cleaned out. The gas is estimated at 100,000 feet a day. The Turkey Mountain sand was found at 2,730-33 feet. It is believed the discovery of the Turkey Mountain sand in this territory will result in additional tests being drilled by other oil operators in Okmulgee County. The discovery well will be produced from its present depth after it has been cleaned out.

Creek County

Kemp & Nunnelly and others made location for No. 1 Benson, NW cor., Section 31-17-7. The Texas Company's No. 9 Weaver, SE cor. NE SE, Section 13-19-8, has been completed for 55 bbls. in Skinner sand at 2,243-90 feet after a shot of 170 quarts. Gled Oil Co.'s No. 1 Fish, NE cor. SE NW, Section 7-19-9, has been abandoned at 2,430 feet. No. 9 Koch, NE cor. SE NE, Section 20-19-9, made 150 bbls. in Skinner sand at 2,213-60 feet. Ben Curtis and others' No. 1-A Reynolds, SW cor. SE, Section 29-17-12, is dry and abandoned at 2,414 feet.

Hughes County

Mid-Continent Petroleum Corp. is erecting the rig for No. 1 Jacobs, NW cor. NE SE, Section 9-7-8.

Marshall County

C. B. Goddard Oil Co. and others' No. 6 Marshall, NE cor. SW, Section 30-5s-6, has been completed for 17 bbls. in sand at 625-40 feet.

Muskogee County

H. L. Jolly moved a machine in for No. 4 J. Spaulding, SW cor. SE SE NE, Section 8-15-18. J. V. Dunbar's No. 2 E. Spaulding, SW cor. NE SW, Section 4-15-18, is dry and abandoned at 1,110 feet.

Oklahoma County

Phillips Petroleum Co. and others made location for No. 1 Brimm, Block 4, Lot 22, Walnut Grove Addition to Oklahoma City, SW cor. NE NW NE, Section 3-11-3w. Anderson & Prichard's No. 1 Dennis, Block 4, Lots 12 and 13, Hill's Subdivision of Fletcher Heights, SE cor. NE NW SE, Section 22-11-3w, is a rig under construction. Phillips Petroleum Co.'s No. 1 Beighler, NW cor. SE NE, Section 22-11-3w, has been completed for 587 bbls.in eight hours from Wilcox sand at 6,464 feet, total depth 6,479 feet.

Okmulgee County

Hazlett & Elson Oil Co. made location for No. 1-A Peloche, SW cor. SE NE SE, Section 23-15-12. Atkinson & Chapman and others' No. 1-A Thompson NW cor. NE SW, Section 6-14-13, is drilling at 150 feet. Castleman and others' No. 6 B. Thomas, CSL SW SE, Section 23-14-14, is rigging up. J. L. Selby's No. 4-A Flint, NE cor. NW, Section 26-14-14, is drilling at 660 feet. J. H. Rebold's No. 1-A Charles, C SW SW, Section 28-13-11, is a machine rigging up.

Osage County

Lindy Oil Co.'s No. 4, SW cor. NE NW SW, Section 29-20-12, is drilling at 940 feet.

Pawnee County

A. J. Bookout's No. 1-A Pierce, NE cor. SE SW, Section 20-20-10, is dry and abandoned at 1,991 feet.

Pontotoc County

Rabial Oil Co.'s No. 1 Brown, SE cor. NE NE, Section 28-5-6, has been completed for 192 bbls. in sands at 1,656-69 feet and 1,721-35 feet. Max Westheimer's No. 6 Milner, CSL SE SE, Section 8-5-8, is pumping 22 bbls. from sand at 818-30 feet.

Pottawatomie County

Noble Drilling Co. and Indian Territory Illuminating Oil Co.'s No. 1 Lucas, NW cor., Section 2-6-4, is a cellar. Amerada Petroleum Corp.'s No. 1 Mitchell, NE cor., Section 3-6-4, is rigging up rotary.

Seminole County

The Texas Company is building a rig for No. 2 Sandlin, NE cor. SE SW, Section 29-9-6, East Earlsboro area. Empire Oil & Refining Co. made location for No. 4 Fish "B," SW cor. NE SE, Section 19-7-8. Location has also been made for No. 1 Campbell, NW cor. SW SW, Section 20-7-8. No. 1 Davis "B," NW cor. SE NE, Section 30-7-8, is also a location.

Stephens County

J. C. Chambers and others' No. 1 Delan, SW cor. NW NW, Section 15-1s-8w, is a rig under construction. Continental Oil Co.'s No. 2 Dare, NE cor. NW SW SE, Section 2-2s-8w, has been completed for 36 bbls. in sands at 2,088-96 feet, 2,096-2,114 feet and 2,114-22 feet.

KANSAS FIELDS

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SE Section 28-23-11, is estimated at 50 bbls. a day from the Bartlesville sand at 1,982-97 feet after a 60-quart shot. It was being cleaned out and swabbed.

Cowley County

Fine and others' No. 1 Wallace, SW cor., Section 28-32-4, is dry and abandoned at 3,079 feet.

Greenwood County

Harwood Oil Co. and others made location for No. 3 Beal, SE cor. SW SE, Section 28-23-11. McGinnis and others moved a machine in for No. 2 Peoples, SE cor. NW NE, Section 33-23-11. Aikman & Braden and others' No. 1 Povemire, NE cor. SE SE, Section 15-22-13, has been abandoned at 1,863 feet.

McPherson County

Rush Oil Co. and others' No. 1 Robinson, C SE SW, Section 10-19-2w, is rigging up to deepen from 2,940 feet. Helmerick & Payne and Shell Petroleum Corp. made location for No. 1 Johnson, C SW NE, Section 13-19-2w, Ritz-Canon area. Rush Oil Co. and others' No. 2 Robinson, C NE SW, Section 10-19-2w, has been completed for 145 bbls. in chat at 2,932-83 feet. Lassen and others' No. 2 Hale, SW cor. NE, Section 24-19-2w, has been completed for a potential of 1,240 bbls. in the Viola lime at 3,397-3,414 feet. P. J. Breslin and others' No. 1 Flook, NE cor. NW, Section 35-19-2w, made 255 bbls. in 17 hours from chat at 2,907-62 feet.

Russell County

Palmer and Deep Rock Oil Corp.'s No. 1 Pasek, C SE, Section 3-14-11w, is dry and abandoned at 3,427 feet.

Sedgwick County

Skelly Oil Co. and Davis' No. 9 Wilson, SW cor. NE, Section 1-26-1w, is a dry hole at 3,474 feet.

Sumner County

Trees Oil Co. and others made location for No. 1 Tompkins, SW cor., Section 26-33-1e. Gypsy Oil Co. staked location for No. 2 Williams, SW cor. NE SW, Section 16-35-3w.

Standard (Ind.) Clears Market Status

Refined Markets Uncertain and Buyers Were Coy While Uncertainty Was On. Tank Wagon Advance Expected to Follow

By Robert C. Conine
Chicago Bureau, The Oil and Gas Journal, 6 North Michigan Ave.

CHICAGO, Apr. 11.—After some three weeks of anxious waiting while the crude oil price situation hung in the balance, the tension which has been felt in Chicago district oil trade circles has been suddenly relieved with the announcement of Standard Oil Co. (Indiana) that effective this morning it advances its crude oil prices in Kansas, Oklahoma, North and North Central Texas 15 cents a barrel. The nervousness which had begun to show in the district markets had reached a point last week that a promising period of buying activity was halted sharply, apparently until the crude situation should come to a showdown. The jobbers and distributors had been filling up and it appeared that many of them would book ahead at the quotations made by the refiners over certain periods. However, the continued unsettlement in the market for the raw product began to make the outlook dubious and the buyers made the decision to do their purchasing from day to day and to draw from their storage, usually two weeks to a month's supply, if the refiners moved their prices higher. It was a gamble to see whether the refiners would hold their prices up if the jobbers stayed out of the markets for a comparatively long period.

Tank Wagon Advance Seen

Oil men in Chicago district feel no doubt that tank wagon and service station postings throughout the territory will be advanced at least a cent a gallon. The telegram of President Seubert of Standard to Thurman Hill of the Kansas Public Service Commission is taken as an indication that a service station and tank wagon price boost is to be expected as a result of the crude price advance. Even before this latest development a retail advance was reported scheduled for about the middle of this month.

Explaining Some Margins

A clear demonstration of the error of jumping at conclusions is given in the recent activities of a moderately large refiner and marketer and the reaction thereof among at least five other refiners and marketers. The situation revolves around the chief bane of marketing in the territory, wider marginal guarantees for the jobbers and distributors, with the spread advancing from 3 cents to higher marks in outright guarantees and in various guises such as the allowance of a full cent for trucking, one-half cent for rental, one-quarter cent for advertising, and finally the 7-cent marginal spread was passed and the amazing thing is that the competitors did not learn immediately the full details of this feat. The competitors stretched their margins and wondered, it may be supposed, how long it would last.

What the refiner who was allowing the 7-cent marginal guarantee was doing is simply this: He was buying a controlling interest in the jobbers' business. From 2 cents to 2.5 cents of the spread was applied on the refiner's purchase of the controlling interest, so that the actual Q.D.A. was no more than 4.5 to 5 cents. Naturally when competitors launched into the fray with guarantees of 5.5 and 6 cents, possibly more, without any purchase of the business being involved, the refiner who started the supermargins was halted and the competitors are looking hopefully for the expected tank wagon and service station advance. The service station price, exclusive of gasoline state tax, is 12 cents in Chicago; the 6-cent spread brings this down to 6 cents; the 2.44 Group 3 freight charge reduces this to 3.56 cents, and there are other costs.

Interpretation Challenged

One action of Standard Oil Co. (Indiana) has apparently thrown a shadow across the marketing situation, and without valid reason according to officials of the company. This is in connection with the Post Office bidding which resulted in the Standard company's obtaining the 200,000-gallon business with the top price of 4.25 cents, Group 3, and a concession to the Government of approximately half the 2.44-cent freight rate because of the special freight rate enjoyed by the Government. This business, marketers say, gives the only official indication of what the Standard company expects in the gasoline markets for the next three months. This view of the marketers, it is said at the Standard company's offices, is without the slightest foundation, and evidence tends to show that the Post Office business has been made a special case by the company while the routine business is moving at prices considerably above the 4.25-cent mark. "We have let others take the Post Office business for six years now," it was said at Standard, "and our decision to remind others that we are to be considered occasionally was fortified by the fact that our refinery costs continue practically unchanged and the 200,000 gallons of gasoline involved do not mean a manufacturing loss such as would be the case with a refiner who works on a closer day to day balance between profit and cost. Naturally we have been forced to meet price competition in various districts, but on the whole our quotations are better than the ruling spot markets and the indications are good that the 'soft' spots are being cleared up."

Service Station Price Cutting

The strongly advancing gasoline tank car markets have had no reflection in the retail end of the business, and Monday finds the price cutters as much in evidence as ever. One of the major refiners and marketers is again spreading out the points at which it meets competition of the third grade with its regular gasoline. At some of the service stations of this company one gallon of gasoline is given away with every purchase of 7 gallons at the regular price of 15 cents, including 3-cent state tax. Price cutting competition from blenders will probably begin to recede as soon as the weather beomces warm. The natural gasoline used in making the low price blend has a vapor pressure of over 20 pounds and is quoted in the district at 2⅝ cents to the trade. The naphtha has until just recently been scarce at 4⅛ cents. At the close of last week more naphtha became available, principally from Oklahoma and from the Del Rio (Texas) district, but the price continues firm. Some slightly yellow naphtha can be picked up for slightly under the ruling markets and is suitable for dyeing. At the prices for the blending materials the finished motor fuel cost is 3½ cents and the octane number is reported between 68 and 70. The stabilized natural gasoline is out of reach except where a premium grade is marketed as the cost is right in line with the U. S. Motor quotations. The advantage of blending the stabilized natural and high-grade naphtha is solely for those who have established a premium motor fuel which sells at the service station at the price of the regular grade of the larger competitors.

In Milwaukee the situation is apparently growing worse every day. The major companies recently moved down the postings on their third grade to meet the 11.5-cent price of the trackage station operators. This price includes a state tax of 4 cents. Today the retail markets in that city have moved down drastically at several points. One distributor who handles between 70 and 80 cars of motor fuel a month has made a tank wagon price of 9 cents, including tax, to certain jobbers, so that when the Group 3 freight rate is deducted the price comes to 2.33 cents a gallon.

Jobbers Awaiting Developments

Jobbers in Chicago district may not know what is going to happen in the gasoline tank car markets, but they have decided to move warily, relying on their storage, ranging from 1 to 10 cars capacity, which has apparently been filled and gives them some assurance that they will not be caught empty-handed in the event of a sharp upward movement in the tank car prices. Buying continues at about the same level as last week in spite of the more favorable weather conditions.

That the refiners have become discontented with the ease with which their products have been borne down in the markets through the unloading of large stores of material, is indicated in the stand which several of the larger refiners are now taking in regard to fuel oil and distillates. These refiners say that they consider certain published fuel oil, gas oil and distillate quotations entirely out of line and that in the future their spot prices will be higher. If sales fall off, they say, the materials will go to the cracking units. Several of the fuel oil distributors show that they are not expecting the abnormally low fuel oil markets to continue into next year. Contracts of some of these distributors base the price of the fuel oil as follows: The first car will be priced on a basis of the crude oil price and every other car will be priced on the basis of quotations of a major marketer.

The unusually good position of kerosenes is attributed to seasonal considerations even more than to its statistical condition which is good. It is pointed out that we are going into the peak of the kerosene consumption curve at a time when the necessity for speeding up work on the farms makes the use of horses as motive power disadvantageous.

More Settled Outlook

The announcement of Standard Oil Co. (Indiana) boosting the price of crude oil in Kansas, Oklahoma, North and North Central Texas, was received with feelings of great relief even by those who do not feel that such an advance is justified by refined products prices. The announcement has cleared the decks, figuratively speaking, for action, and with one great question mark out of the way the distributor and jobbers are able to size up the situation with greater probability of deciding upon the proper course. The warning of the Standard company officials that "crude oil is valueless except as value may be realized from products into which it may be separated," and that "the price of crude oil must always be determined by the prices the products will bring," must be heeded if the industry is not to have a debacle which will sap the confidence of the oil men who have untiringly sought to bring the industry out of the dumps.

The significant statement from the Standard officials which is held to mean that tank wagon and service station postings must be advanced throughout the territory immediately is as follows: "If the new crude prices are to be maintained, it must be by a general increase in prices for finished products. We (Standard Oil Co. of Indiana) assume that in demanding an increase in the crude price you (Thurman Hill of Kansas Public Service Commission) are willing to assume the responsibility of causing advanced prices of gasoline and other finished products to the farmers and other consumers in Kansas and elsewhere at a time when the commodity price trend is downward and general conditions are demoralized. The hopes advanced that this action will aid in stabilizing conditions may be realized, although the results of similar temporary expedients in recent months do not encourage the belief. Unless such hopes are realized, it is obvious that the price will not hold."

Gasoline Tank Car Markets

The gasoline tank car markets up to today have been marking time with the ruling prices ranging between 4 and 4¼ cents on one and two-car orders, with a few cars moving at higher prices. Even if the Standard announcement had not appeared today, however, it is likely that the jobbers would have to begin paying more and that they would have to take a more active buying position if it is their intention to keep their storage up because the weather has taken a decided turn for the better in spite of the threat of April showers and gasoline consumption is expected to show a decided bulge this month. All of the gasolines moved up an eighth of a cent from the highest point reached last week as follows: U. S. Motor, 4¼ to 4½ cents; 61-62, 400 endpoint, 4⅜ to 4⅝ cents; 64-66 375 endpoint, 4⅝ to 4⅞ cents; aviation gasoline, 5⅝ to 5⅞ cents; 68-70 360 endpoint, 4⅞ to 5⅛ cents. A better demand among the jobbers for antiknock gasoline is reported by marketers.

Naphtha Tank Car Markets

The naphtha tank car markets will probably remain steady at their present levels until one of the major sellers advances its quotations to meet those of other sellers. The troubles of the gasoline markets in the tank wagon end are more widespread and display wider marginal guarantees, but the naphtha tank wagon markets are similarly afflicted, especially at such points as Minneapolis, Detroit, Kansas City and St. Louis. The 50-52 450 endpoint naphtha used for bending motor fuel has advanced an eighth of a cent to a range of 4 and 4¼ cents. A yellowish naphtha of 42 degrees gravity and good octane number may be bought for an eighth under. Naphtha prices Monday were: Cleaners', 6¼ to 6½ cents; lacquer diluents, 9¼ to 9½ cents; rubber solvent, 5 to 6 cents; Stoddard solvent, 5½ to 5¾ cents; petroleum thinner, 4¾ to 5 cents; V.M.P. naphtha, 5¾ to 6 cents; petroleum spirits, 4¼ to 4⅝ cents. The wide ranges may be explained for the most part by the fact that sellers adjust their Group 3 quotations to meet various differential shipping situations.

Kerosene Tank Car Prices

The kerosene tank car markets are reaching the peak of their activity and prices have advanced a quarter of a cent over the last week. The 41-43 water white material is offered at 3⅜ to 3½ cents, and the 42-44 water white kerosene is quoted at 3½ to 3⅝ cents. Prime white is scarce as most producers are said to be spending the extra fraction of a cent to make the water white material.

Fuel Oils and Gas Oils

As already mentioned, several refiners are moving up their fuel oil prices this week on the open market so that the quotations in The Oil and Gas Journal will probably not show the usual seasonal sag at the low end caused by heavy stocks left on hand after seriously curtailed heating oil season.

East Coast Expects More Price Raises

Refined Products "Marking Time" Pending Further Developments. Oil Tariff Situation Holds Interest As Imports Jump Sharply

By A. E. Mockler
New York Bureau, The Oil and Gas Journal, Suite 2803, No. 19 Rector Street

NEW YORK, Apr. 11.—Steady to strong markets for refined products prevailed throughout the East Coast territory during the past week, and while no further price changes of major importance developed during the period, sentiment in marketing circles continued bullish and it was expected that the trend toward higher prices would again make itself evident in the near future. The further strengthening in the position of the crude oil market, and the advances in refinery gasoline prices in the Southwest all tended to strengthen sentiment in this area, and predictions of impending advances in posted prices for gasoline, kerosene, and fuel oil were heard in many quarters of the trade.

Major East Coast refiners, most of whom are large sellers in the bunker fuel oil market, are watching tariff developments at Washington rather closely. In connection with the tariff question, it is general opinion that imposition of an import duty will affect the fuel oil market more strongly than that for crude or other refined products, and it appears generally felt that any substantial tariff impost may shut out further imports, but will realize little in the way of tariff income for the Government. Widespread interest is shown in market circles over the provision which the tariff bill will make for drawbacks. If oil companies are permitted to land fuel oil at American ports "in bond" the bunker oil business would be little affected. If, on the other hand, no such drawback will be permissible, the effect on the bunkering business of the proposed tariff would be far-reaching.

There was a sharp increase in import movement of both crude and refined for the week ending April 2, a total of 4,131,000 bbls., made up of 2,705,000 bbls. of crude, 662,000 bbls. of gasoline, 743,000 bbls. of fuel oil, and 21,000 bbls. of gas oil being received from abroad at Atlantic and Gulf ports (principally for former) during the week. This sharp gain (imports for the previous week totaled 1,868,000 bbls.) is the first reflection of the recent diversion of a large fleet of tankers to the movement of South American and Mexican crude and refined products, and mirrors the efforts of the major companies to land as much foreign oil as possible before imposition of any import duties. It is expected that continued heavy receipts will be witnessed during the next several weeks.

While stocks of gasoline for the country as a whole declined during the week ending April 2, marking the first drain on stocks in some time, East Coast refinery holdings increased from 6,680,000 bbls. as of March 26 to 7,015,000 bbls. on April 2, and gas and fuel oil stocks jumped from 5,705,000 bbls. to 5,848,000 bbls. Considering the fact that during the week unusually large quantities of gasoline and fuel oil were imported, and that this import movement is a temporary condition incidental to abnormal shipments in anticipation of a tariff, the statistical position of the East Coast markets was more favorable than indicated by the actual figures.

Reports from Rumania indicating further reduction in crude output (although the decline is apparently dictated more by transportation difficulties and low prices than by curtailment sentiment), and the assurance that Russia is willing to participate in a round-table conference of world petroleum producers with a view of developing some plan of stabilization, have cheered sentiment with regard to the outlook for some world accord, in principle at least. The directors of the American Petroleum Institute are expected to formulate their policy with respect to a world conference at a meeting here later in the day.

Refinery Gasoline

Posted prices for both regular U. S. Motor gasoline and the special grades of 65 octane number and higher have remained unchanged at principal refinery points throughout East Coast area during the past week. There was a good gallonage reported in the tank car market, and jobbers were keeping storage full and making replacements with confidence, anticipating a general upward movement in posted prices.

The advent of the summer motoring season is expected to witness a general stepping up of gasoline quality in this area. Tide Water is just about ready to place two new cracking units in operation at its Bayonne plant, with combined daily capacity of over 5,000 bbls. of high octane number gasoline. Standard Oil Co. of New York is reported to be adjusting a new cracking unit at its Stone & Fleming plant in Brooklyn for the production of high octane gasoline, and one or two of the other major companies are reported considering plans for the installation of new cracking units, to produce a high octane number motor fuel.

Warmer weather has stimulated the demand for the regular quality U. S. Motor gasoline, averaging between 60 and 65 octane number, but the steady advance in the market for the lower grades is tending to keep the market in a steady position.

Gasoline imports during the week ending April 2, aggregating some 27,800,000 gallons, were largely responsible for the increase recorded in stocks at East Coast refineries for that period. The week's imports compared with an average of about 8,250,000 gallons per week for the previous four weeks, and reflected the heavy influx of South American petroleum arranged by major companies in anticipation of a tariff on foreign oils.

Tank Wagon Gasoline

Continued firmness is evident in eastern tank wagon and service station gasoline markets. The price structure for the territory as a whole shows more evenness than for many months back, and the market is apparently "set" for a further general advance, which is expected to come with the next increase in refinery quotations.

Gallonage in tank wagon markets has been surprisingly heavy in many sections of the East, and some marketers who entered into 1932 with rather gloomy expectations for the year are now cheerfully revising upward their expected sales total figures.

Kerosene

Tank car sales have held up fairly well during the week, and while a stronger undertone is still discernible in the spot market, quotations have not yet been advanced. The posted price for 41-43 water white holds unchanged at 5½ cents per gallon, refinery, with most of current sales going through at one-quarter cent under that figure. Refiners are talking a firm 5½-cent market, however, and there is a possibility that the posted level will be advanced as soon as refinery gasoline prices go higher.

Tank wagon kerosene sales have run into sizeable quantities during the period under review, and posted prices have been well maintained at all points in the territory. Mild weather has made for good consumption, and marketers anticipate a satisfactory volume throughout the spring months.

Fuel Oil

East Coast bunker oil markets have been without change throughout the week. Volume has held up well and the market is steady at recently advanced prices of 65 cents per barrel at principal ports, with the exception of Philadelphia, where the posted price is 70 cents. Marketers at other ports have been watching the Philadelphia situation closely, with an idea of establishing a uniform price of 70 cents per barrel for East Coast ports, but are apparently not yet convinced that Philadelphia has succeeded in actually establishing the 70-cent level.

Interest in the progress of the tariff bill is paramount in bunker oil circles, with the major companies moving in considerable quantities of Mexican and South American fuel oil in anticipation of an import duty. Passage of a tariff law, without provision for drawbacks, it is generally agreed, will further strengthen fuel oil quotations in the East.

Diesel Oil

The Diesel oil market has not yet followed the bunker oil market to higher levels, but there are indications that an early advance may materialize. If and when Diesel oil is moved up, however, it is expected that the increase will be larger than has been the case with bunker "C", as refiners state that Diesel oil is considerably underpriced at $1.30 per barrel here.

The further strengthening in the position of crude oil markets in the Southwest has created a better sentiment with respect to Diesel oil, and an advance in California crude at this time would definitely crystallize market sentiment in favor of higher price levels for Diesel on the East Coast, it is believed. At present California is still a potential competitor with the East Coast in large sales on the Atlantic Seaboard.

Gas Oil

Gas oil markets have just about held their own during the week under review. Major sellers are posting 28 plus recycled gas oil at 4 cents per gallon in tank car lots at terminals, but the general market has not yet firmed up to this level, and some spot business is still going through at concessions.

Furnace Oil

There were no changes in posted prices on either refinery or tank wagon furnace oils during the week, and a stable market is anticipated during the short remainder of the heating season. Business eased off a little during the past week.

Refiners and marketers are deferring the naming of quotations for 1932-33 furnace oil contracts, pending a definite solution of the oil tariff question.

Lubs

A better undertone continues evident in the lub oil market, with prices firm and still showing an upward tendency.

Export demand for lub oil has shown a little improvement locally in the past week, although intercompany shipments still account for a large part of the volume of lub oil exports moving out through the local port.

Wax

Traders report a more active market for spot wax this week, with the higher melting points of the fully refined grades still getting the call.

Export buying of both crude scale and the fully refined grades is a little more active, and inquiries in the market this week indicated a fair amount of business pending for the nearby positions.

Petrolatum

Business was fairly active in the petroleum market during the week, and posted prices were well maintained. Contract deliveries are accounting for a good bit of the current movement, but spot sales are likewise on the increase.

Export Market

Continued quiet has characterized the Gulf export market during the past week, with quotations for both gasoline and kerosene nominally unchanged. Foreign buyers continue to hold off the market pending stabilization of domestic markets here, but Rumania and Russia continue as formidable opponents for this business. Rumanian export quotations, f.o.b. Constanza, as of March 24, were as follows: Gasoline, 730 gravity, $15.55 per ton; heavy gasoline, $10.69 per ton; lamp oil, $6.32 per ton; white spirit, first grade, $8.99 per ton; white spirit, second grade, $7.53 per ton; gas oil, $5.30 per ton; fuel oil, $3.58 per ton.

Petroleum Exports

The following table shows refined petroleum exports from the port of New York for the past three weeks (all figures in gallons unless otherwise noted):

	Week ended		
	Apr. 2	Mar. 26	Mar. 19
Gasoline	70,000	205,000	8,000
Naphtha	161,000	255,000	310,000
Kerosene	74,000	32,000	15,000
Fuel oil	5,000	275,000	14,000
Lubricating oil	3,450,000	2,500,000	535,000
Petroleum, ref'd.	320,000	352,000	165,000
	Pounds		
Petrolatum		12,000	485,000
Paraffin wax	1,050,000	1,135,000	2,010,000
Refined	118,000	120,000	
Scale	455,000	980,000	135,000
Lub. grease	175,000	800,000	475,000

Imports

Recent reports of a heavy concentration of tankers to move Mexican and South American petroleum into the United States prior to any possible tariff imposition are reflected in a sharp increase in imports at principal ports.

Imports of crude and refined petroleum at the principal United States ports for the week ended April 2 total 4,131,000 bbls., a daily average of 590,143 bbls., compared with 1,868,000 bbls., a daily average of 266,857 bbls. for the previous week, and a daily average of 354,179 bbls. for the four weeks ended April 2. Details follow:

	Bbls. of 42 gals.
At Atlantic Coast Ports—	
Baltimore	302,000
Boston	199,000
New York	2,118,000
Philadelphia	432,000
Others	545,000
Total	3,596,000
Daily average	513,714
At Gulf Coast Ports—	
New Orleans and Baton Rouge	535,000
Total	535,000
Daily average	76,429
At all United States Ports—	
Total	4,131,000
Daily average	590,143
Daily average four weeks	354,179

Distribution of total imports for the week ended April 2 was as follows:

Crude	2,705,000
Gasoline	662,000
Gas oil	21,000
Fuel oil	743,000

California Oil Receipts

While receipts of California gasoline and other refined products have been exceedingly limited during recent weeks, a sharp increase in movement is indicated by reports from California on tanker clearances.

There was only one cargo received during the week, 47,000 bbls. of gas oil at Baltimore. This oil is for delivery to the local gas company on a term contract. Daily average receipts of California oil for the week were 6,714 bbls., against no receipts for the previous week and a daily average of 8,393 bbls. for the four weeks ended April 2.

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Tulsa, Oklahoma

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All sizes reconditioned pipe and casings. Also Oil & Gas Well supplies and Gasoline plant equipment. All at very low prices.
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Bartlesville, Oklahoma

WILL TRADE $15,000 oil well fittings for oil payments—pipe or royalty. Box 1785, Fort Worth, Texas.

BARGAINS—Arc Welders, gasoline or electric drive. 30 Days Trial—Terms if desired. Write Ken's Equipment Exchange, Box OG-42, Troy, Ohio.

FOR SALE—One string of good used Cable Tools in San Miguel County, New Mexico. Price very cheap. Terms. The Bridgeport Machine Co., Box 730, Wichita, Kansas.

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Address Inquiries to C. R. Talbert, Joe Howie, F. J. Lotterhos, trustees, Jackson, Mississippi.

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WANTED—Old storage tanks to salvage. Western Iron & Foundry Co., Wichita, Kans.

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WILDCAT OPERATIONS IN MISSISSIPPI

(Continued from Page 35)

Company, farm and location—	Remarks:
HINDS COUNTY	
Atkins et al's No. 1 Crane Lawrence, Sec. 23-6n-1e, 300 ft. E, 132 ft. N, SW cor. NE SE	Derrick.
Miss.-Minn. Oil Co.'s No. 1 Edwards Land Co., Sec. 23-6n-4w, 1,200 ft. N and E from center of Sec.	Drlg. 2,190 ft.
JASPER COUNTY	
Bay Springs Pet. Co.'s No. 1 Keyes, C NW NE, Sec. 2-12-9	T.A. 3,408 ft.
LOWNDES COUNTY	
Lowndes County Oil & Dev. Co.'s No. 1 Carr est., Sec. 34-17-16e, 1,320 ft. E, 330 ft. S, NW cor. Sec.	Rigging up.
NEWTON COUNTY	
Bob Dalton's No. 1 Majure, 400 ft. N, 300 ft. E, SW cor. SE, Sec. 25-6n-11e	S.D. 840 ft.
NOXUBEE COUNTY	
Thompson & Donohue's No. 1 Donohue, Sec. 25-16n-17e	S.D. 1,735 ft.
RANKIN COUNTY	
Atkisson & Dyer's No. 1 Valentour, 200 ft. S, 200 ft. E, NW cor., Sec. 18-5n-2e	Completed for 30,000,000 ft. gas; spray S.W. 2,486 ft.
Baker et al's No. 1 Rankinside Dev. Co., Sec. 6-5n-2e, 200 ft. N, 200 ft. E, SW cor. NW SW	Completed for 46,937,000 ft. gas 2,366 ft.
Majestic O. & G. Co.'s No. 1 Elton Lbr. Co., Sec. 10-4n-3e	Derrick.
Orr et al's No. 1 Hanna, Sec. 14-5n-1e, 500 ft. E, 250 ft. S, NW cor. SW	Set 10-in. 101 ft; drlg. 1,530 ft.
SCOTT COUNTY	
M. U. Culley et al's No. 1 Owens, Sec. 2-8-9	Derrick.
SHARKEY COUNTY	
United Gas Public Service Co.'s No. 1 Lenhart, Sec. 14-14n-6w, 660 ft. N of C of S line of Sec.	Drlg. 2,304 ft.
WARREN COUNTY	
Eagle Bend O. & G. Co.'s No. 1 Kiger, SW cor. SW SE, Sec. 9-18-2	S.D. 2,607 ft.

GULF COAST FIELDS AND WILDCATS

(Continued from Page 38)

Humble Oil & Ref. Co. and Gulf Prod. Co.'s No. 2-B Lockwood & Sharp, John Rabb Sur., 816 ft. W of No. 1-B	Location.
HIGH ISLAND—GALVESTON COUNTY	
Yount Lee Oil Co.'s No. 26 Cade, N. Fitzsimmons Sur., 600 ft. S of No. 24	Hard sand showing oil 5,045 ft.
Yount Lee Oil Co.'s No. 27 Cade, N. Fitzsimmons Sur., 600 ft. N of No. 21 in line with Nos. 22 and 23	Drlg. sand and lime 4,400 ft.
Yount Lee Oil Co.'s No. 1 Broussard & Orme, 300 ft. E of N cor. of N. Fitzsimmons Sur., in Martin Dunman Sur.	Hard sand showing oil 5,130 ft.
SARATOGA—HARDIN COUNTY	
Rio Bravo Oil Co.'s No. 133-A "B"	Set 1 joint 10-in. screen 551 ft.; bailing.
HUMBLE—HARRIS COUNTY	
J. E. Burt et al's No. 1 C.O.&G.-The Texas Company fee, J. B. Stevenson Sur.	Pulling screen to deepen 2,282 ft.
J. E. Burt et al's No. 2 C.O.&G.-The Texas Co. fee, J. B. Stevenson Sur., 450 ft. N of No. 1	Location.
Rio Bravo Oil Co.'s No. 7 fee (W.O.), W. B. Adams Sur., 216 ft. from W line and 50 ft. from S line of 22-acre tract, Bender South Addition	Pulling screen to deepen 4,126 ft.
Sun Oil Co.'s No. 27 Bender, W. B. Adams Sur., 250 ft. W of No. 26 in line with No. 25	No report.
Sun Oil Co.'s No. 51 River, Robert Dunman Sur., 130 ft. S of No. 50	Drlg. sand and shale 1,355 ft.
The Texas Company's No. 24 W.&P. fee, J. B. Stevenson Sur., 50 ft. from W line and 50 ft. from S line	Rig.
PIERCE JUNCTION—HARRIS COUNTY	
Anderson & Plummer's No. 4 Whitehead (W.O.)	Abnd. 4,798 ft.
Anderson & Plummer's No. 7 Whitehead, Jas. Hamilton Sur. No. 51, 248 ft. S of No. 4 and 304 ft. from E line	Rigging up.
Navarro Oil Co.'s No. 3-A Cain (W.O.), Jas. Hamilton Sur. No. 98; 75 ft. from S line and 50 ft. from W line of "A" lease	Sand and shale showing oil 3,863-71 ft.
Pure Oil Co.-Moody Receiver's No. 3 Herman, Jas. Kopman Sur., 200 ft. due W of C of E line of 25-acre tract	Drlg. lime 3,430 ft.
Rio Bravo Oil Co.'s No. 24-A Settegast, J. Kopman Sur. No. 44, 1,900 ft. S and 200 ft. W of NE cor. of "A" lease	Drlg. gumbo and lime 2,595 ft.
Rio Bravo Oil Co.'s No. 8-B Settegast (D.D.), J. Kopman Sur. No. 44, 300 ft. from N line and 50 ft. from E line of "B" lease	Abandoned in salt 3,368 ft.
MYKAWA—HARRIS COUNTY	
F. R. Flannigan et al's No. 3 Minnetex (W.O.), 125 ft. from W line and 100 ft. from S line of Blk. 252, Wm. Lovett Sur.	Cleaning hole to work over 4,873 ft.
ESPERSON—LIBERTY COUNTY	
Cranfill-Reynolds Co.'s No. 20 Esperson, C. W. Fisher Sur., 471 ft. from W line and 510 ft. N of No. 5 Esperson	Coring sand showing oil 3,065 ft.
Cranfill-Reynolds Co.'s No. 9 Moore's Bluff, M. Duncan Sur., 500 ft. S of N line of Moore's Bluff tract in line with No. 6 Davis and No. 6 Moore's Bluff	Location.
HANKAMER—LIBERTY COUNTY	
Gulf Prod. Co.'s No. 15 Boyt, H.&T.C. Sur. No. 22, 500 ft. E and 500 ft. S of No. 12	Drlg. gummy shale 3,596 ft.
HULL—LIBERTY COUNTY	
D. & L. Prod. Co. and Bashara Oil Co.'s No. 1 Pevito, Jesse Devore Sur., 34½ ft. from E line and 30 ft. from N line of 5-acre strip	Derrick.
Republic Prod. Co.'s No. 63-A Dolbear, Jesse Devore Sur., 50 ft. NW of No. 63 in line with No. 61	Drlg. shale 650 ft.
MARKHAM—MATAGORDA COUNTY	
Claude Hamill et al's No. 1 Northern Irrigation Co., 50 ft. out of SW cor. of N 80 acres (half) of NW Sec. 5, Blk. 9, I.&G.N. Sur.	Set 13 ft. 4¾-in. screen 3,504 ft.; sanded.
The Texas Company's No. 1 Texas Pipe Line Co., Wm. Hadden Sur., Blk. 5, 50 ft. S and 50 ft. W of NE cor. of tract	Rigging up.
United North & South Oil Co.'s No. 1 McDonald, I.&G.N. Sur., Blk. 9, Sec. 5, 460 ft. S and 80 ft. E of NW cor. 35-acre tract	T.D. 3,698 ft.; plugged to sand at 3,577-81 ft.; tested dry.
PORT NECHES—ORANGE COUNTY	
The Texas Company's No. 1 Polk-Kuhn-Glass, 260 ft. E and 1,545 ft. S of SW cor. Marshall Beaucham Sur., in the T. J. Notgrass Sur.	Drlg. water sand 6,654 ft.
The Texas Company's No. 3 Polk, T. J. Notgrass Sur., 500 ft. NE of No. 2 Polk	Set 21¼ ft. of 4¾-in. screen 3,153 ft.; comp. flowing 300 bbls. daily.
The Texas Company's No. 3 Kuhn, 587 ft. S and 150 ft. W of NE cor. of the Mary E. Hall Sur. No. 2	Drlg. sticky shale 3,982 ft.
ORANGE—ORANGE COUNTY	
Sun Oil Co.'s No. 1 Bellle (D.D.)	Cleaning hole to deepen 3,655 ft.
REFUGIO—REFUGIO COUNTY	
E. M. Jones' No. 1-B Mitchell (D.D.), 250 ft. NW of SE line and 250 ft. SW of Mission River	Drlg. shale 8,120 ft.
Larco Gas Co.'s No. 4 Strauch heirs, 150 ft. from N line and 150 ft. from W line, Lot 6, Blk. 2	Rigging up to resume drilling at 3,696 ft.
Moody-Seagraves Prod. Co.'s No. 2 O'Connor (W.O.),150 ft. from N line and 508 ft. from W line 62-acre tract	T.D. 6,454 ft.; to plug back.
Pearson Properties' No. 2 Ryals (W.O.), 600 ft. from S line and 150 ft. from W line of lease	T.D. 5,718 ft.; sidetracked at 5,126 ft.; drlg. shale 5,678 ft.
United Prod. Corp.'s No. 5 Mitchell (W.O.), Refugio Townsite, 159 ft. from N line and 438 ft. from E line of tract	T.D. 6,446 ft.; cmtd. bottom of hole.
United Prod. Corp.'s No. 3 W. J. Fox (D.D.), Wm. Hews & L. Brown Sur., 2,099 ft. NE along SE line from SE cor. of lease, thence 1,690 ft. NW at right angles	Rig up to deepen 6,474 ft.
United Prod. Corp.'s No. 4 W. J. Fox, 2,600 ft. NE along SE line from SE cor. of Wm. Hews and L. Brown Sur., thence 1,420 ft. NW at right angles	Drlg. sticky shale 1,776 ft.
United Prod. Corp.'s No. 5 W. J. Fox, 2,150 ft. NE along SE line from SE cor. of Wm. Hews and L. Brown Sur., and thence 890 ft. NW at right angles	Drlg. sticky shale 1,850 ft.
SOUTH LOUISIANA FIELDS	
JENNINGS—ACADIA PARISH	
Russell Campbell's No. 3 Syndicate (D.D.), 475 ft. S and 350 ft. W of NE cor. Sec. 41-9s-2w	Standing 1,880 ft.
Heywood & Heywood's No. 2 Jennings fee sample, 50 ft. N of SE cor. and 15 ft. W of E line of Lot 9, Sec. 46-9s-2w	Rig.
Kathleen Oil Co.'s No. 1 Syndicate fee (W.O.), Sec. 46-9s-2w	Twisted off 4,025 ft.; shut down.
Reliable Oil Co.'s No. 2 Rawson (D.D.)	No report.
IOWA—CALCASIEU AND JEFF DAVIS PARISHES	
Shell Petroleum Corp.'s No. 2 Heyd, 225 ft. out of NE cor. of Sec. 13-9s-7w	Drlg. medium hard sand 6,801 ft.
Shell Petroleum Corp.'s No. 1 Fontenot, Sec. 7-9s-6w, 450 ft. due E No. 2 Heyd	Drlg. sandy shale 5,666 ft.
EDGERLY—CALCASIEU PARISH	
S. A. Emerson et al's No. 15 Hunter, Sec. 21-9s-11w, 265 ft. SE of No. 10	Drlg. gumbo 2,400 ft.
LOCKPORT—CALCASIEU PARISH	
Union Sulphur Co.'s No. 2 Martha Moss (W.O.), 120 ft. S and 56 ft. W of NE cor. SE NW of Sec. 8-10s-9w	Drlg. sandy shale 6,930 ft.
SULPHUR—CALCASIEU PARISH	
Union Sulphur Co.'s No. 732 fee (W.O.), 965 ft. N and 2,065 ft. W of C of Sec. 29-9s-10w	Drlg. sticky shale 4,220 ft.
Union Sulphur Co.'s No. 768 fee, 175 ft. N and 188 ft. W of SE cor. SW NW of Sec. 29-9s-10w	Drlg. sticky shale 4,290 ft.
Union Sulphur Co.'s No. 769 fee, 295 ft. S, 918 ft. W of C of Sec. 29-9s-10w	Set 1 joint 6⅝-in. screen 3,835 ft.; comp. flowing 2,500 bbls. P.L. oil, 300 lbs. pressure, ¾-in. choke.
VINTON—CALCASIEU PARISH	
Marrs McLean's No. 13 Gray, 464 ft. E and 460 ft. S of C of Sec. 30-10s-12w	Drlg. sand showing oil.
Vinton Petroleum Co.'s No. 1 Matilda Gray (20 acres), 48 ft. N and 89 ft. W of SE cor. SW NE of Sec. 23-10s-12w (D.D.)	T.D. 3,214 ft.; sidetracked 3,016 ft. to sand 3,053 ft.; cemented.
HACKBERRY—CAMERON PARISH	
Calcasieu Oil Co.'s No. 23 Watkins (W.O.), 2,495 ft. W and 132 ft. N of SE cor. Sec. 13-12s-10w	Set 2 joints 3-in. screen 2,830 ft.; comp. dry gas well.
Calcasieu Oil Co.'s No. 8 Dorion, 1,280 ft. S and 792 ft. E of NW cor. Sec. 24-12s-10w	Spudded.
Calcasieu Oil Co.'s No. 33 Watkins, 1,466 ft. E and 3,841 ft. N of SW cor. Lot 9, Secs. 37, 38 and 39, in Sec. 24-12s-10w	Rig.
J. G. Sutton's No. 6 Irwin, 1,820 ft. N and 1,845 ft. W of SE cor. of Sec. 13-12s-10w	Spudded.
Union Sulphur Co.'s No. 1 Gulf land (Pure Oil Co. lease), 1,420 ft. N, 400 ft. W of SE cor. Sec. 11-12s-10w	Drlg. sticky shale 5,324 ft.
Yount Lee Oil Co.'s No. 28 State, 850 ft. E, 600 ft. S of NW cor. Sec. 24-12s-10w	Location.
Yount Lee Oil Co.'s No. 50 State, 600 ft. S, 700 ft. E of NW cor. of Sec. 24-12s-10w	Location.
Yount Lee Oil Co.'s No. 51 State, 545 ft. S, 560 ft. E of NW cor. of Sec. 24-12s-10w	Location.
Yount Lee Oil Co.'s No. 52 State, 495 ft. S, 420 ft. E of NW cor. of Sec. 24-12s-10w	Location.
Yount Lee Oil Co.'s No. 53 State, 445 ft. S, 275 ft. E of NW cor. of Sec. 24-12s-10w	Location.
SWEET LAKE—CAMERON PARISH	
Pure Oil Co.'s No. 11 Yount Lee, Sec. 12-13s-8w, 800 ft. S 66 deg. 42 min. from No. 9	Location.
PORT BARRE—ST. LANDRY PARISH	
W. A. Aggers' No. 1 Cochran, 250 ft. S and 250 ft. E of NW cor. of Fractional Sec. 21-6s-5e	Drlg. sandy shale 3,478 ft.
Port Barre Oil Co.'s No. 1 Sibille, Sec. 20-6n-5e, 600 ft. S and 124 ft. E of NW cor. 30-acre tract	Set 1 joint 4¾-in. screen 3,388 ft.; comp. flowing 500 bbls., 700 lbs. pressure, ½-in. choke.
The Texas Company's No. 11 Botney Bay, N 82 deg. 10 min. W 474 ft. from NE cor. of tract and N 7 deg. 50 min. E 105 ft. in Sec. 4-6s-5e	Drlg. gumbo 1,175 ft.
MISCELLANEOUS WILDCATS	
TEXAS	
AUSTIN COUNTY	
C. O. Farrington et al's No. 1 Jackson, Brookshire, S. F. Austin Sur. No. 10, 750 ft. NW of Empire Gas & Fuel Co.'s No. 1 Jackson and 250 ft. S of NW line	Cmtd. 10-in. csg. 60 ft.; standing.
Grant & Baker's No. 1 Chesley, W. C. White Sur., 150 ft. from NW line and 150 ft. from SW line of 26-acre tract (northeast of Raccoon Bend Field)	Cmtd. 10-in. csg. 196 ft.; standing.
O'Hara Oil & Gas Co.'s No. 1 Neilius, J. C. Cummings Hacienda Sur., 650 ft. N of No. 1 Schroeder in 18-acre tract, north edge Mill Creek	Derrick.
Pomacal & Boletka's No. 1 Schebajsa, 329 ft. N, 78 deg. E of N cor. B. Dottery Sur., near center of SW line of S. F. Austin 4 League on west fork of Mill Creek	Shut down 1,740 ft.
Vogelpohl et al's No. 1 Trenchman, J. Cummings Hacienda Sur., 319½ ft. from E line, 1,244 ft. from S line of 32¼-acre tract	No report.
BRAZORIA COUNTY	
John Deering's No. 1 C. W. Chapman, 294 ft. from S line and 104 ft. from E line of Lot 2, Andrew Robinson Sur.	Preparing to resume drlg. 1,514 ft.
The Texas Company's No. 2 Belcher, Manvel (D.D.), 1,728 ft. southeasterly and 1,231 ft. southwesterly at right angles out of N cor. of lease, Harvey Little Sur.	Drlg. sand and shale 5,690 ft.
United Oil Syndicate's No. 2 Levitt, John Peske Sur., 75 ft. NW of No. 1	Drlg. sand and shale 1,256 ft.
BURLESON COUNTY	
Marek & Son's No. 3 A. Marek, N. McFaddin Sur., 1,068 ft. N and 225 ft. W of SE cor. of tract	Standing 2,210 ft.
M. O. & T. Corp.'s No. 1 Rigers	Shut down 2,050 ft.
Sampson Oil & Gas Co.'s No. 1 Duckworth & Gilley, 100 ft. from S line and 100 ft. from W line of Blk. 8, P. Singleton Sur.	Location.
J. E. Stubblefield et al's No. 1 Mitchell, A. T. Woolridge Sur., 81 ft. SW and 4,340 ft. SE of S cor. of Joseph Henson Sur.	Drlg. gumbo 600 ft.

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COLORADO COUNTY

Coyle-Concord Oil Co.'s No. 1 Nelson, I.&G.N. Sur., Sec. 43 ..... Rigging up.

FORT BEND COUNTY

O'Hara et al's No. 1 Brown, Pilant Lake, Wm. Barrett and Abner Harris Sur., 600 ft. out of SW cor. of Brown 600-acre tract ..... Drlg. shale 2,835 ft.

Naylor & DeCosta's No. 1 Naylor, 6,350 ft. N, 55 deg. E from SW cor. 653-acre tract in Christman Sur. ..... Cmtd. 12½-in. csg. 1,221 ft.; S.D.

GRIMES COUNTY

Barnett et al's No. 1 Dodd, Timothy Jones Sur., 280 ft. N, Cobb & Rasmussen's No. 1 Dodd ..... Rock 1,792 ft.

Rianjo Oil Co.'s No. 3 Cuthrell, Patrick B. O'Connor Sur., 150 ft. S, 10 deg. E of No. 2 ..... Shut down 1,150 ft.

Stanolind Oil & Gas Co.'s No. 1 Mary Sullivan, A. Yeamen's Sur., 998 ft. out of SE cor. of 712-acre tract ... Drlg. sticky shale 3,245 ft.

HARDIN COUNTY

Rotay Oil Co.'s No. 1 Southwestern Lbr. Co., 150 varas W of C of E line of Mary K. Sherman Sur. ..... Location.

HARRIS COUNTY

Flanigan et al's No. 1 Woodburn, Genoa, August Whitlock Sur., 200 ft. out of NW cor. of tract ..... Location.

Shubert & Alexander's No. 1 Herman Hale, 1,058 varas E of NW cor. R. A. Hanks Sur., thence 790 varas S and thence 70 varas W 74 deg. ..... Drlg. sandy shale 3,335 ft.

JACKSON COUNTY

Chicago Gulf Corp.'s No. 4 Druschell (W.O.) ..... No report.

Chicago Gulf Corp.'s No. 10 Druschell, Hayes Sur., 1,300 ft. NW of No. 3 ..... No report.

JASPER COUNTY

Hext Drlg. Co.'s No. 1 Flourney, B. F. Jones Sur., 900 ft. NW of Helmerich & Payne's No. 1 Flourney ..... T.D. 4,005 ft.; shut down.

JEFFERSON COUNTY

Brown et al's No. 1 M. O. Todd, 200 varas S and 58 varas E of NW cor. of Wm. Carr Sur. ..... Drlg. sand and shale 3,576 ft.

John I. Pipkin and Elam's No. 1 Broussard, McGaffey Sur., 800 ft. from S line in center E and W of 205-acre tract ..... Drlg. shale 2,595 ft.

C. R. Tolliver et al's No. 1 Tolliver, Duches Sur., 3,500 ft. from W line and 1,500 ft. S of Pine Island Bayou.. Drill stem stuck 4,125 ft.; pulled derrick in.

LIBERTY COUNTY

Devore Oil Co.'s No. 1 Finley, 10,500 ft. from E line and 2,000 ft. from S line of A. B. Hardin Sur. ..... Drlg. shale and lime 2,495 ft.

Hamm et al's No. 1 Harvard, Davis Hill ..... Gumbo 1,015 ft.; shut down.

J. T. May et al's No. 1 Dunman, J. C. Martin League.... Location.

MATAGORDA COUNTY

Dr. Griffith et al's No. 3 Baer, Big Hill, 5,000 ft. N, 3,000 ft. E from SW cor. of Seth Ingram Sur. ..... Drlg. sand and shale 1,136 ft.

United North & South Oil Co.'s No. 1 Stoddard, J. C. Keller Sur., 150 ft. W and 545 ft. N of SE cor. Blk. 53, Buckeye Townsite ..... Corrected depth 7,828 ft.; sand showing oil; trying to set 6⅝-in. csg. 7,770 ft.

MONTGOMERY COUNTY

Heep Oil Corp.'s No. 1 Cartwright, 2,851.6 ft. southerly along W line from NW cor. of John D. Davis Sur. and thence 450 ft. from said line ..... Setting 86 ft. screen; T.D. 5,078 ft.

Heep Oil Corp.'s No. 1 Roberts, Wm. H. Harrison Sur., 450 ft. out of SE cor. of tract ..... Derrick.

Heep Oil Corp.'s No. 1 Hammond, Charles B. Stewart Sur., NE cor. of Hammond 232.5-acre tract ..... Location.

Pevehouse Oil Co.'s No. 1 Sealey, Jas. Pevehouse Sur., 1,575 ft. N of N line of Horton & Woodson's 1,562-acre tract and 2,226 ft. E of W line of H.&W. 1,870-acre tract ..... Shut down 3,984 ft.

Strake Oil Corp.'s No. 2 South Texas Development Co., Theo. Slade Sur., 2,220 ft. S 10 deg. E of No. 1 ..... Location.

Wilson Oil Co.'s No. 2 Leiberman (Kelley-Baker), 7,175 ft. from W line and 75 ft. from S line of D. James Sur. ..... T.D. 4,922 ft.; drill stem test 3,551-70 ft.; showed negative.

NEWTON COUNTY

R. T. Briscoe et al's No. 1-A Joe Inman, 1,950 ft. E and 500 ft. N of SW cor. J. M. Scott Sur. ..... Shut down 1,795 ft.

ORANGE COUNTY

Altex Oil Co.'s (Veteran Oil Co.) No. 1 Reed, A. Nelson Sur. No. 1, 500 ft. from N line and 250 ft. from E line of tract ..... Sandy shale 4,210 ft.

Crew Oil Co.'s No. 1-A Mansfield, 50 ft. E of No. 1 ..... Shut down 2,275 ft.

POLK COUNTY

Freeman et al's No. 2 Freeman ..... Shut down 3,162 ft.

T. B. Hoffer's No. 1 Saner-Ragly Lbr. Co., 300 ft. out of most northerly cor. of most easterly County School Land Abst. 271 ..... Shut down 1,517 ft.

REFUGIO COUNTY

Blanco Creek Oil Co.'s No. 1 Damaan, 150 ft. from N line and 150 ft. from W line of Blk. 14, Bonnie View Ranch Subd. ..... Shut down 4,627 ft.

J. C. Doxin's No. 1 Peck, 450 ft. S, 150 ft. E of NW cor. of S half of Sec. 24, Bonnie View Ranch Subd., Estaban Lopez Sur. ..... Shut down 100 ft.

Humble Oil & Ref. Co.'s No. 2 O'Connor, John Keating Sur., 12,625 ft. N of S line at right angles and 3,158 ft. W of E line at right angles ..... Drlg. hard sand 3,220 ft.

SAN JACINTO COUNTY

E. P. Edwards' No. 1 J. R. Bennett, Cold Springs ..... Shut down 750 ft.

Seven Wells Oil Co.'s No. 1 Foster Lumber Co., 2,000 varas from the E line and 2,000 varas from the S line of H. Alsbury Sur. ..... Location.

TRINITY COUNTY

John Deering's No. 1 J. B. Gibson ..... Shut down 2,017 ft.

Scientific Producers Co.'s No. 1 Thompson, I.&G.N. Sur. No. 47, 50 ft. out of NE cor. of H. K. Thompson 199-acre tract ..... Alnd. 1,191 ft.

TYLER COUNTY

King Oil Co.'s No. 1 Caswell ..... Sand and shale showing oil 1,210 ft.; cem. 6-in. casing 1,218 ft.; standing.

Allied Pet. Co.'s (Texas Southern Pet. Co.) No. 3 Wilson, Mrs. E. Cherry Sur. No. 798, 1,500 varas from W line and 600 varas from N line ..... Shut down 5,025 ft.

VICTORIA COUNTY

Bunte et al's No. 2 Keeran, Martin DeLeon Sur., 200 ft. E of No. 1 ..... Drlg. shale 2,367 ft.

Houston Oil Co.'s No. 1-A McFaddin, 200 ft. from NE line, 240 ft. from SE line of I.R.R. Sur. No. 20 ..... Drlg. shale and lime 1,620 ft.

T. B. Slick Estate's No. 2 McFaddin, J. Varian Sur., 3,500 ft. NW of No. 1 and 1,100 ft. NE at right angles to SW line of lease ..... Drlg. shale and lime 2,946 ft.

The Texas Company's No. 4 McFaddin, 86 deg. E, 1,738⅝ ft. from NE cor. of Andrew J. Gray Sur. in John M. Rine Sur. ..... Drlg. sand and shale 2,558 ft.

WALKER COUNTY

Hart Oil Co.'s No. 1 Thompson Lbr. Co., Jose Ortega Sur., 1,265 ft. S, 1,876 ft. W of SW cor. of J. B. Gibson's 71-acre tract ..... Shut down for repairs 2,090 ft.

WALLER COUNTY

McDaniel and associates' No. 1 Citizens State Bank, B.B.B.&C. Sur., C of 150-acre tract ..... No report.

SOUTH LOUISIANA
ASCENSION PARISH

McElroy Pet. Co.'s No. 2 Lacey, 150 ft. S, 150 ft. W of NE cor. of Sec. 29-10s-4e ..... Shut down 4,515 ft.

CALCASIEU PARISH

Crawford Doyle's No. 1 Johnson, Sec. 23-9s-13w ..... Shut down 875 ft.

Hill Oil Co.'s No. 1 W. S. Vincent et al, 642 ft. W, 75 ft. N from SE cor., Sec. 25-10s-10w ..... Shut down 3,255 ft.

Wilfred Lahay's No. 1 Jardell, Sec. 16-10s-12w ..... Shut down 3,650 ft.

Success Oil Co.'s No. 1 Hewitt, 90 ft. out of SW cor., Sec. 11-9s-11w ..... Rig.

CAMERON PARISH

Brownie-Babbette Oil Co.'s No. 1 R. A. Moore, 562 ft. W, 50 ft. S of NE cor. E half SE of Sec. 18-12s-12w.. Drlg. shale 3,865 ft.

EVANGELINE PARISH

Emile LeDeau's No. 1 Vidrine, 260 ft. W and 350 ft. S of NE cor. of Sec. 47-3s-2e ..... Shut down 1,420 ft.

IBERIA PARISH

Warrick Oil Co.'s No. 1 Bernard, 912 ft. N and 150 ft. E of SW cor. Sec. 54-12s-7e ..... Rig.

IBERVILLE PARISH

Standard Oil Co.'s No. 2 Myrtle Grove-Wilbert, Bayou Choctaw, 2,040 ft. N and 600 ft. W of C of Sec. 52-9s-11e ..... Drlg. hard sand and pyrites 3,000 ft.

Standard Oil Co.'s No. 2 Gay, Bayou Choctaw, 4,500 ft. N and 600 ft. E of SW cor. SE of Sec. 52-9s-11e..... Drlg. 5,490 ft.

Standard Oil Co.'s No. 7 Schwing, Bayou Blue, 1,359 ft. N and 1,856 ft. E of C of Sec. 74-9s-10w ..... Drlg. gumbo 5,020 ft.

LA FOURCHE PARISH

Pop Oil Co.'s No. 1 Esponge Vizier, Sec. 26-21-22e, 78 ft. N, 289 ft. E of The Texas Company's No. 4 L.L.&E. ..... Set 16 ft. of 4½-in. screen 3,734 ft.; comp. flowing 800 bbls. net oil, 20 per cent water, ½ and ⅝-in. chokes.

State Prod. Co.'s No. "D" W. H. Stark, 1,935 ft. S and 1,550 ft. W of NE cor. Sec. 72-15s-15e ..... Sulphur test.

POINTE COUPEE PARISH

Grand Bay Oil & Gas Co.'s No. 1 Moniotte, 10,140 ft. S and 13,450 ft. E of NW cor. Twp. 5s-11 in Sec. 24.... Shut down 310 ft.

TERREBONNE PARISH

Freeport Sulphur Co.'s No. 1 Wurzlow, 1,200 ft. N and 2,600 ft. W of SE cor. Sec. 8-22s-18e ..... Abnd. 793 ft.

La. Gas & Fuel Co.'s No. 2 Minor, 3,480 ft. S and 1,980 ft. E of NW cor., Sec. 3-18s-16e ..... No report.

The Texas Company's No. 5 State, Dog Lake, 2,270 ft. S and 450 ft. E of NW cor. of Sec. 5-22s-16e ..... Drlg. sandy lime 2,195 ft.

The Texas Company's No. 2 La.L.&E., Lake Barre ..... Drlg. 300 ft.

The Texas Company's No. 10 State, Lake Barre ..... Location.

The Texas Company's No. 12 State Lake Barre ..... Oil sand 3,761-3,809 ft.; cmtd. 6⅝-csg. 3,760 ft.

The Texas Company's No. 14 State Lake Barre ..... Location.

VERMILLION PARISH

Pure Oil Co.'s No. 2 Alliance Trust Co., Gueydan 1,-875 ft. E and 950 ft. S of NW cor. of Sec. 34-11-1w... Sand 3,552 ft.

WEST FELICIANA PARISH

Putnam Synd.'s No. 3 Como Plantation, Sec. 51-1s-14w... Shut down 2,449 ft.

SOUTHWEST TEXAS PROVEN AREAS

(Continued from Page 37)

SALT FLATS POOL—CALDWELL COUNTY

Joe Bruner's No. 1 Malone, 150 ft. to N line, 750 ft. to W line of tr., A. Floyd Sur. ..... T.D. 2,788 ft.; flowing 20 bbls. dly. into tanks.

John Storey's No. 1 Dickerson, 150 ft. to N of center of S line of tr., John R. Rains Sur. ..... Rigging up.

COLE POOL—DUVAL COUNTY

Cole Pet. Co.'s No. 75 Benavides, 365 ft. from NE line, 150 ft. from NW line, Blk. 8, Sec. 18, Mariana Arispe grant ..... T.D. 4,075 ft.; drlg.

GOVERNMENT WELLS—DUVAL COUNTY

Duval Oil Corp.'s No. 9 Bishop Cattle Co., 2,216 ft. to W line, 2,221 ft. to N line of Sur. No. 135 ..... Location.

Humble O. & R. Co.'s No. 3 Paul White, 1,650 ft. from S and W lines of sur. ..... T.D. 2,306 ft.; comp. 500 bbls.

SLICK POOL—GOLIAD COUNTY

T. B. Slick estate's No. 2 Allen, 1,660 ft. from NE line, 330 ft. from NW line of tr. in Obid Marshall Sur. Rigging up.

DARST CREEK POOL—GUADALUPE COUNTY

John R. Camp's No. 2 Sue Denman, 300 ft. S and 300 ft. W of No. 1 Sue Denman ..... Location.

Humble O. & R. Co.'s No. 4-C Denman, 650 ft. from E line, 600 ft. NE of No. 3-C Denman ..... T.D. 2,549 ft.; comp. 25 bbls. hourly.

CHITTIM POOL—MAVERICK COUNTY

Texas Gas Utilities' No. 8 Chittim, 24 ft. S of No. 7 Chittim ..... T.D. 5,100 ft.; standing.

SAXET FIELD—NUECES COUNTY

Gulf Coast Oil Co.'s No. 1 Perkins and LeGasse, 330 ft. from N and E lines of 245-ac. tr., Sec. 26, Shepard Subd. ..... T.D. 2,852 ft.; drlg.

Houston Oil Co.'s No. 1 McGregor, 150 ft. from E line, 330 ft. from S line of 100-ac. tr. in Sur. 311 ..... T.D. 4,265 ft.; changing choke.

Kepley et al's No. 1 Speer and Hocker, 200 ft. from E and S lines of 850-ac. tr., in Speer and Driscoll lands ..... Spudded in.

Rutherford Drlg. Co.'s No. 1 Hunter, 150 ft. from S and W lines of 10-ac. tr. ..... T.D. 2,200 ft.; drlg.

Saxet Oil Co.'s No. 5 Well, 3,041 ft. to N line, 333 ft. to W line ..... T.D. 2,500 ft.; standing.

Saxet Oil Co.'s No. 6 Dunn, 600 ft. S of No. 5 Dunn, 4 miles from Corpus Christi ..... T.D. 6,713 ft.; drlg.

ARANSAS POOL—SAN PATRICIO COUNTY

Atlantic Oil Prod. Co., to deepen to 6,000 ft. the Welder Oil Corp.'s No. 3 Welder ..... T.D. 3,689 ft.; cleaning out.

WHITE POINT—SAN PATRICIO COUNTY

United Prod. Co.'s No. 3 Cage ..... T.D. 4,125 ft; reinstated to deepen.

LOS OLMOS POOL—STARR COUNTY

Bennett O. & G. Co.'s No. 1 Seabury et al, Porcion 75.... Moving in.

Coastal O. & G. Co.'s No. 1 Kelsey-Bass, 448 ft. to N line, 150 ft. to W line of Tract 52, Sur. 2, Porcion 86.. Location.

Davis et al's No. 3 Kelsey-Bass, 150 ft. from N and W lines of W 10-ac. of SE NW of Sur. 6, Subd. of Porcions 75, 76 and 77 ..... T.D. 493 ft.; comp. 20 bbls.

H. H. Davis' No. 4 Kelsey-Bass, 20 ft. to E line, 150 ft. to N line of SW NW Sec. 6, Subd. of Porcions 75, 76 and 77 ..... T.D. 320 ft.; drlg.

Felder, Mitchell & Barnsley's No. 1 Kelsey-Bass, in Sur. 8, Subd. of Porcions 75, 76 and 77 ..... T.D. 320 ft.; drlg.

Hooks and Weaver's No. 6 Kelsey-Bass, 525 ft. to S line, 150 ft. to W line of lease ..... T.D. 469 ft.; going on pump.

M. A. Landrum's No. 2 Kelsey-Bass, 519 ft. from S line, 150 ft. from E line of Sur. 6, Porcions 75, 76 and 77 ..... Location.

Los Olmos O. & G. Co.'s No. 11 Kelsey-Bass..... T.D. 452 ft.; going on pump.

M. A. Landrum's No. 1 A. K. Bass, Sec. 6, 150 ft. to S and E lines of lease ..... Location.

Tom C. Patton's No. 1 Kelsey-Bass, 150 ft. to W line, 150 ft. to S line of 20-ac. tract in NW NE of Subd. 8 of Porcions 75, 76 and 77 ..... Spudded in.

R. H. Pursley's No. 1 Seabury, 150 ft. from E line, 4,-125 ft. from S line of Share 5, of W two-thirds of Porcion 75 ..... T.D. 439 ft.; abd. dry.

Quien Sabe O. & G. Co.'s No. 3 Kusch, Share 11, W two-thirds of Porcion 75 ..... T.D. 488 ft.; drlg.

Rio O. & G. Co.'s No. 1 Kelsey-Bass (formerly carried as Los Olmos O. & R. Co.'s No. 1 Kelsey-Bass) T.D. 910 ft.; standing.

Rio O. & G. Co.'s No. 2 Kelsey-Bass, No. 6 Subd., Porcions 75, 76 and 77 ..... T.D. 486 ft.; drlg.

Tarver and Nance's No. 3 Kelsey-Bass, 150 ft. from N and W lines of SW SE Sec. 7, Subd. of Porcions 75 76 and 77 ..... T.D. 450 ft.; set csg.

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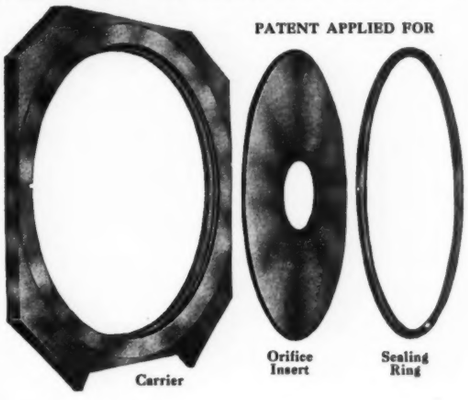

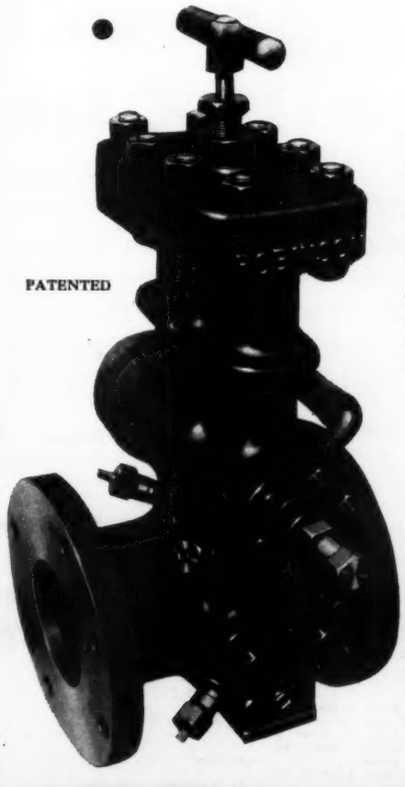

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WEST COLE POOL—WEBB COUNTY

French Oil Corp.'s No. 7 Benavides, 2,310 ft. from N line, 150 ft. from W line of Sur. 659 ..... Spudded in.

ESCOBAS POOL—ZAPATA COUNTY

E. K. Bateman's No. 1 M. Garza Estate, 150 ft. to NE and SE lines of Douglas Subd. of Comitas grant ..... Location.
E. R. Black & Paul S. Williams' No. 1 Comitas grant, 150 ft. from NW and NE lines of Blk. 100 ..... Derrick.
F. M. Blair & Son's No. 1 Montemayor, 450 ft. to N, 150 ft. to E line of Blk. No. 1, Sur. 63 ..... T.D. 1,390 ft.; drlg.
Daniels & Hill's No. 2 Montemayor, 112 ft. from N line, 774 ft. from E line of Blk. 7, Sur. 64 ..... T.D. 1,484 ft.; abnd.
O. W. Killam's No. 5 Medina, 325 ft. from SE line, 480 ft. from NE line of Share 34 of Comitas grant ..... T.D. 1,466 ft.; comp. 75 bbls.
W. M. Lee's No. 1 I. G. Trevino, 150 ft. from S and W lines of Blk. 7, Sur. No. 66 ..... T.D. 1,450 ft.; drlg.
McGinley Oil Corp.'s No. 1 G. T. Montemayor, 450 ft. to W line, 150 ft. to S line of Blk. 2, Sur. 64 ..... Rigging up.
D. M. Shaffer's No. 1 M. Garza, 150 ft. from NE and NW lines of Blk. 56, C. A. Douglas Subd. of Zerro ranch ..... T.D. 1,475 ft.; abnd.
Trevino Oil Corp.'s No. 16-A Trevino, 150 ft. from S and E lines of Blk. 14, Sur. 412 ..... Location.
Trevino Oil Corp.'s No. 1-C Trevino, 364 ft. from N line, 665 ft. from W line of Blk. 15, Sur. 412 ..... T.D. 900 ft.; drlg.

CHARCO-REDONDO POOL—ZAPATA COUNTY

Bob & Richey's No. 29 Martinez, 810 ft. from SW line, 360 ft. from SE line of Blk. 24, W. R. Duke Subd., Charco Redondo grant ..... Location.

WILDCAT OPERATIONS IN SOUTHWEST TEXAS

(Continued from Page 37)

S. W. Blount's No. 1 S. A. Land Co., I. Perez Sur., 1,000 ft. to N line, 450 ft. to W line of tract ..... T.D. 520 ft.; abnd.

BROOKS COUNTY

Allen & Morris' No. 1 Lasater, NW part of county ..... Making location.
Ed East's No. 1 A. Garcia, 600 ft. from N and E lines of 2,168-ac. tract in SW part of county ..... T.D. 85 ft.; set surface csg.
Ed East's No. 1 A. Garcia, 600 ft. from N and E lines of 2,168-ac. tract ..... Set surface csg. 85 ft.

CALDWELL COUNTY

Cole & Moseley's No. 1 Pierce, 150 ft. to NW and SW lines of tract, Solomon Seal Sur. ..... T.D. 2,114 ft.; drill stem stuck.
George Sullivan and Shell Petroleum Corp.'s No. 1 Plinsoll, 2,800 ft. to SW line, 300 ft. to NW line of tract and survey in M. Dennis Sur. ..... Bldg. derrick.
Kistler, Stivers & Hendrick's No. 1 D. Carter, 400 ft. from NW line of Sur., 300 ft. NE of Creek in I. Allen Sur. ..... T.D. 1,485 ft.; standing in chalk.
Meyer's No. 1 G. C. and W. Walker, Solomon Seal Sur. .. T.D. 160 ft.; to be completed by Cranfill & Reynolds.
C. J. Webster Oil & Gas Co.'s No. 1 McCrory in John Neil Sur. ..... T.D. 2,128 ft.; drlg.

COLORADO COUNTY

Coyle-Concord Oil Co.'s No. 1 Stewart Nelson in L.&G.N. Sur. No. 43 ..... Rigging up.

DEWITT COUNTY

Pat Armstrong's No. 1 E. T. Clark, 2,000 ft. S of Simms-Republic's No. 1 Clark in Jose Santos Sur. .... Moving in.

DUVAL COUNTY

John F. Camp's No. 1 Well, 900 ft. NW and 150 ft. NE of cen. of Sur. No. 670 ..... T.D. 200 ft.; set surface csg.
Frank Gravis et al's No. 2 Schallert, 425 ft. to E line, 150 ft. to S line of Blk. 10, Cain & Smith Subd. "A", Sur. No. 255 ..... T.D. 1,610 ft.; standing.
French Oil Corp.'s No. 1 Flores in Survey 731, 1,000 ft. N, 25 degrees W of Sun Oil Co.'s No. 1 Flores in Survey 730 ..... Moving in rig.
Hynes and Nessly's No. 1 Duval Ranch Co., 200 ft. from S and E lines of Blk. 26, Sur. No. 196 ..... Rigging up.
O. W. Killam's No. 1 Peters, 150 ft. from E line, 450 ft. from N line of SE of Sur. No. 1 ..... T.D. 2,725 ft.; standing.
Seacord and Putnam's No. 1 J. W. Johnson, 150 ft. to S and W lines of NW NW, Sur. 44 ..... T.D. 1,573 ft.; set csg.
Smith & Capps' No. 1 Duval ranch lands, 1,520 ft. from NE line, 2,490 ft. from SE line of Sur. 576 ..... T.D. 2,355 ft.; set csg.
Suttle et al's No. 1 Bennett, 150 ft. from N and E lines of Sur. No. 44 ..... Drlg. water well.
R. A. Thompson's No. 1 Parr, 2,640 ft. to W line, 12,160 ft. to S line of San Andres grant ..... T.D. 4,011 ft.; standing.
Trinity Drillers, Inc.'s No. 1 Hagist, 3,892 ft. from W line, 4,400 ft. from S line of Sur. 122 ..... Location.

FAYETTE COUNTY

A. D. Becker's No. 1 fee, 972 ft. from N line, 700 ft. from W line of tract in Williamson Sur. ..... Location.

GUADALUPE COUNTY

Luling Oil & Gas Co.'s No. 1 J. D. Brown, 160 ft. from N line, 450 ft. from E line of tract in C. Wall Sur. .. T.D. 2,500 ft.; drlg.
Sal Mar Oil Corp.'s No. 1 F. A. Pfullman, 150 ft. from W line, 1,050 ft. from N line of tract in Lewis Bollinger Sur. ..... Moving in rig.

GOLIAD COUNTY

Hoffman & Gooch's No. 1 Fromme, 600 ft. from N and 1,200 ft. from W line of Peter B. Dexter Sur. ..... T.D. 2,590 ft.; drlg.
Plymouth Oil Co.'s No. 2 Parks, 400 ft. S of No. 1 Parks in Solomon Parks Sur. ..... Spudded in.
Neal et al's No. 1 J. M. Pettus, 10,700 ft. to S line, 2,500 ft. to E line of Pedro Trevino Sur. ..... T.D. 4,565 ft.; standing.

GONZALES COUNTY

Crowder Oil Co.'s No. 1 Preston, 1,000 ft. from W line, 2,000 ft. from N line of W. W. Pace Sur. ..... T.D. 200 ft.; standing.
Edmiston & Kirby Petroleum Co.'s No. 1 J. W. Ward, Jr., 200 ft. from N and W lines of tract in Dan McKay Sur. ..... Derrick up; moving in tools.
Johnson & Mattock's No. 1 J. James, 12 miles NE of Gonzales city, 900 varas from E line, 300 ft. from S line of tract in M. A. Williams Sur. ..... T.D. 545 ft.; standing.
Nassamer, Gordon & Waldrop's No. 1 B. Botts, 2,500 ft. from E line, 650 ft. from S line in Sec. 6, Blk. 56, Gonzales Sur. ..... T.D. 950 ft.; standing.

HIDALGO COUNTY

Barrett-Kanellos' No. 1 J. B. Brock, 7 miles W and N from Mission (on Monte Cristo road) ..... T.D. 4,010 ft.; S.D.
LaJoya Oil & Gas Co.'s No. 1 W. L. Hart, 6 miles W from Mission, north of San Fordyce ..... T.D. 4,500 ft.; abnd.
Dayle L. Smith's No. 1, 18 miles W from Edinburg ..... T.D. 4,026 ft.; abnd.
San Roman Oil Co.'s No. 1 J. T. Lomax, 7,500 ft. from S and E lines of San Roman Sur. ..... T.D. 2,500 ft.; S.D.
Dayle L. Smith's No. 3 Daskam, SW part of county ..... T.D. 1,446 ft.; drlg.

JIM HOGG COUNTY

L. W. Connor's No. 1 Holbien, 150 ft. from N and E lines of Blk. 7, Sur. 7, Holbien Subd. of Las Animas grant ..... T.D. 2,400 ft.; drlg.
D. C. DeWitt's No. 1 Gomez, 1,170 ft. from N line, 150 ft. from W line of Sur. No. 12, SW part of county .. T.D. 657 ft.; drlg.
Duval Oil Co.'s No. 1 W. W. Jones, 1,020 ft. from S and W lines of 160-ac. tract in Holden Subd. of Share 5-A in San Diego Hinajosa grant ..... Location.
T. P. Morgan's No. 1 fee, 2,223 ft. to N line, 1,640 ft. to E line of Share 19, Palo Blanco grant ..... T.D. 4,207 ft.; standing.

JIM WELLS COUNTY

F. A. Lain's No. 1 Vernon Porter, 800 ft. from S line, 400 ft. from W line of 200-ac. tract in Sur. 25 ..... Location.
Vacuum Oil Co.'s No. 1 Seeligson, 4,500 ft. to W line, 75,000 ft. to S line of Los Jaboncillos Sur. ..... T.D. 5,100 ft.; drlg.

KARNES COUNTY

A. E. Edmiston's No. 1 O. L. Cochran, 150 ft. from S line, 500 ft. from E line of farm in D. B. McConnell Sur. ..... T.D. 1,820 ft.; standing.
Pickett et al's No. 1 D. E. Lyons in Victor Blanco Sur. .... Rigging up.

KENDALL COUNTY

Dixon Oil Co.'s No. 1 Ottmar Behr, 823 ft. from S and N lines of Jessie Wilson Sur., 3 miles S of Sisterdale ..... T.D. 2,708 ft; standing.
Fred S. Dibble's No. 1 Ellenbrach, Sur. 77, N part of county ..... T.D. 50 ft; S.D.

KERR COUNTY

Geo. Ball's No. 1 F. A. Karger, 3 miles N of Kerville .. Rig on ground.
Evans & Gant's No. 1 E. Young, A. E. Burg Sur. 28 .... T.D. 1,312 ft.; standing.
Verde O. & G. Co.'s No. 1 J. D. Witt, 1,320 ft. from N line, 1,220 ft. from W line of Sec. 1,923, Hamilton Sur., 4 miles from Center Point; T.D. 200 ft; carried to this depth and abandoned as Herber Oil Co.'s No. 1 J. D. Witt ..... T.D. 110 ft.; standing.

KLEBERG COUNTY

H. Carter et al's No. 1 R. H. Simmons, in Sec. 7, King Sur. No. 3 ..... T.D. 3,191 ft.; drlg.

LIVE OAK COUNTY

Catlett & O'Neill's No. 1 H. D. Miller, 2,400 ft. from SW line, 6,125 ft. from NW line of Miller ranch in SE part of county ..... Location.
J. A. Harper's No. 1 fee, 2,130 ft. to N line, 510 ft. to E line of farm, J. Pointevant Sur. 37 ..... Spudded in and standing.
Henderson Coquat's No. 1 Hewitt, 250 ft. from N and E lines of SW of Sec. 5, Thomas Adams Sur. ..... T.D. 1,785 ft.; S.D.
Henderson Coquat's No. 2 Sanger, 1,280 ft. NW of No. 1 Sanger ..... T.D. 3,523 ft.; abnd.

LEE COUNTY

Washington-Lee Oil Co.'s No. 1 Hicket, 1,100 ft. from N line, 200 ft. from E line of tract in J. D. Varreiman Sur. ..... Location.

McMULLEN COUNTY

Jacob Buzzini & Pickett's No. 2 Jacob, 150 ft. NW of No. 1 Jacob ..... T.D. 962 ft.; setting csg

MEDINA COUNTY

Frank A. Brown's No. 1 Fohn, 150 ft. from E line, 790 ft. from N line of J. F. Torry Sur. 113 ..... T.D. 922 ft.; abnd.
Robertson Drilling Co.'s No. 1 Little, 2,350 ft. from N line, 1,500 ft. from E line of E. B. Rutledge Sur., southern part of county ..... Spudded in.

MILAM COUNTY

Birdwell et al's No. 1 E. and J. S. Williams, 150 ft. from N and E lines of 46-ac. tr. in Samuel P. Carson Sur., 5 miles SW of Rockdale ..... Spudded in.
H. W. Elliott's No. 1 Marek, 767 ft. from N line, 500 ft. from W line of 160-ac. tr. in B. Wickson Sur. ..... T.D. 3,000 ft.; S.D.
Frank A. Yeager's No. 1 Hose, 750 ft. from E line, 150 ft. from S line of lease in E. Allen Sur. ..... T.D. 1,675 ft.; comp. 8 bbls.

NUECES COUNTY

Camp and Stanolind O. & G. Co.'s No. 1 King, 600 ft. to N and W lines of Sec. 23, Richard King farm lots subd. ..... T.D. 3,889 ft.; set csg.
C. E. McCarthy's No. 1, W of Corpus Christi ..... Making location.

REAL COUNTY

McGinley Corp.'s No. 1 Haby, C of SW, Sec. 175 ..... T.D. 2,530 ft.; standing.

SAN PATRICIO COUNTY

John F. Camp's No. 1 Jackson, SW cor. SW, Sec. 30, 3 miles from Edroy ..... T.D. 4,850 ft.; drlg.

STARR COUNTY

Davenport et al's No. 1 Wells, 30 miles W of Mission .. T.D. 1,093 ft.; csg. stuck.
R. E. Johnson's No. 1 Goodrich, 1,214 ft. from N line, 1,065 ft. from W line of tr., 1½ miles N of Rio Grande City ..... T.D. 1,382 ft.; comp.; changing screen.
Stryalls Oil Corp.'s No. 1 M. E. Salinas, 155 ft. from N and W lines of lease in Porcion 80, Share 38 .... T.D. 1,540 ft.; standing.
Strayhorn Oil Co.'s No. 1 Caffarelli, Porcion 80 ..... Location.
R. B. Suttle's No. 1 Guerra, 2,000 ft. to N line, 270 ft. to W line of Porcion 110 ..... T.D. 810 ft.; no report.
Jack Tarver's No. 1 Guerra, NE of Rio Grande City .... T.D. 856 ft.; changing to rotary.
Jess Williams' No. 1 Welch, 1,120 ft. to W line, 1,500 ft. to N line of tr. in Pedernal grant ..... T.D. 840 ft.; drlg.

TRAVIS COUNTY

C. R. Franklin et al's No. 1 J. Wilson, 160 ft. from N and W lines of farm in A. Alexander Sur. ..... T.D. 1,210 ft.; S.D.
Ray & Henze's No. 1 Hatech, in C of tr. in S. Hamilton Sur. ..... T.D. 900 ft.; S.D.
Ray & Orth's No. 1 Lundgren, 550 ft. from N line, 150 ft. from W line of 133-ac. tr. in L. Kimbro Sur. .... Location.

WEBB COUNTY

O. W. Killams' No. 5 Bruni, in J. V. Borrego grant .... T.D. 1,376 ft.; drlg.
Norden & Morris' No. 1 Gates, 160 ft. from E line, 50 ft. from S line of Blk. 5, Sur. 19 ..... T.D. 1,083 ft.; resumed drlg.
Power & Dettenhalm's No. 1 Cowan & Goss, 1,870 ft. from W line, 1,656 ft. from N line of Sur. 1,606 .... T.D. 405 ft.; standing.
Phillips Rosenberg's No. 2 Laurel, 150 ft. from N and W lines of Blk. 8, Sur. 271 ..... Derrick.

WILLIAMSON COUNTY

McLean et al's No. 2 R. C. Miller, 800 ft. to S line, 100 ft. to W line of tr. in B. Manlove Sur. ..... Rigging up.
McNeil et al's No. 1 W. R. Lane, 450 ft. from NW line, 150 ft. from SW line of 108.4-ac. tr. in T. E. Shell Sur. ..... Set one joint surface pipe.
G. B. Peterman's No. 1 Gailer, 1,800 ft. from S line, 150 ft. from W line of 140-ac. tr. in H.Y.&B.R.R. Sur. ..... T.D. 1,493 ft.; set csg.

ZAPATA COUNTY

Ballard & Mercer's No. 1 Flores, 500 ft. from NE line, 580 ft. from SE line of Blk. 27, Porcion 37 ..... T.D. 2,497 ft.; trying to get drill stem test.
George Ball's No. 1 Gutierrez, in Charco Redondo grant, taken over from Moore et al to deepen ..... T.D. 2,065 ft.; drlg.
Joe Cullinan's No. 1 E. Gutierrez, 1,992 ft. from NE line, 2,303 ft. from SE line of Charco de la India grant ..... Location.
Major Co.'s No. 1 Benavides, 150 ft. from NW and SW lines of Sur. 12, NE part of county ..... T.D. 1,504 ft.; testing.

ZAVALLA COUNTY

Carpenter & Jenkins et al's No. 1 John Wolf, Sec. 8, Abstract 1,199 ..... T.D. 757 ft.; resumed drlg.

DOMESTIC EXPORTS OF PETROLEUM AND REFINED PRODUCTS

		Month of February		2 months ending Feb.	
		1931	1932	1931	1932
Petroleum, crude	Bbls.	1,710,296	1,896,682	3,629,156	3,527,824
Petroleum, crude	$	1,794,902	1,751,445	4,023,059	3,279,530
Total refined petroleum	Bbls.	7,320,213	5,440,011	16,678,006	12,492,724
Total refined petroleum	$	20,785,798	14,561,957	46,615,620	29,705,364
Gasoline, naphtha and other light products	Bbls.	3,586,221	2,832,948	8,248,445	6,136,260
	$	10,604,224	7,033,180	24,368,534	14,633,065
Oils, illuminating	Bbls.	974,399	733,870	2,249,457	1,918,152
Oils, illuminating	$	3,092,359	1,820,799	6,531,717	4,226,081
Gas and fuel	Bbls.	2,204,064	850,287	4,938,851	2,230,626
Gas and fuel	$	1,967,629	873,778	4,499,195	1,901,385
Lubricating	Bbls.	547,738	592,005	1,223,919	1,194,488
Lubricating	$	5,017,997	4,512,547	10,984,308	8,421,230
Other refined petroleum	Bbls.	7,791	7,238	17,534	18,075
Other refined petroleum	$	103,589	48,021	231,566	139,510
Paraffin wax	Lbs.	23,502,544	17,504,561	45,563,023	40,476,632
Paraffin wax	$	722,313	471,034	1,414,187	1,119,110

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with

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619

DOUBT NECESSITY OF HIGHER OCTANE NUMBER

(Continued from Page 14)

increase in car weight over the same period, reveals the approximate relative increase in performance to be 51 per cent.

Curve 4, Figure 2, shows the increase in specific displacement over the same period to be 8½ per cent, and over this period there is shown an increase in compression ratio of 19 per cent. However, according to curve No. 3, Figure 2, the increased power resulting from the compression ratio increase can be only 9 per cent. Thus, for a total relative power increase of 51 per cent, approximately 8½ per cent can be credited to specific displacement, approximately 9 per cent to compression ratio, and the remainder can only be accounted for by other factors such as carburization, ignition, volumetric efficiency, etc. In the event of compression ratios being increased to 6.5 to 1, this would mean an increase of 48 per cent over the 1927 figure and the resulting increase in power would not exceed 19 per cent. This reveals that very much of the increase in relative power must be accounted for by factors other than the specific displacement and compression ratio.

Comparing Models A and T

A familiar example of the importance of these factors is revealed from a comparison of the Model T and A Ford cars as follows:

	T	A	Per cent change
Specific displacement	878	845	3.9 decr.
Horsepower	20	40	
Weight (corrected for load)	2,500	2,900	
Relative power, $\frac{\text{power}}{\text{weight}}$	80	138	72 incr.
Compression ratio	3.6	4.22	17.2 incr.
Increased power due to increased C/R			9 incr.

While the relative power of the Model A Ford was 72 per cent greater than the T, more than 63 per cent of this must be due to other factors than the compression ratio change. This demonstrates the relatively small part played by increasing the compression ratio in securing higher performance and is a different view of the picture from that usually held by the public.

Referring to the curve of optional compression ratios of the higher priced cars in Figure 3, there will be noted a tendency toward lower compression ratios. There is a certain amount of tremor or roughness in some engines where very high compression ratios are used, which may be objectionable to the owner. Therefore, in some instances a compression ratio lower than the "standard" is available to secure smoother operation. This is somewhat significant as it applies to engines of cars purchased by those who would not object to using a premium priced gasoline.

The use of aluminum cylinder heads is receiving study by some manufacturers owing to the opportunity it offers of employing a higher compression ratio without encountering objectionable fuel knock. There are, of course, some problems in connection with using the aluminum head owing to differences in the coefficient of expansion of the materials involved in the assembly. Long engine blocks offer some trouble in holding gaskets. Some designs may include shorter heads which would mean the cylinder head would be divided into two or more parts, according to the length of the engine. Tearing of the gaskets is a troublesome feature when aluminum cylinder blocks of too great a length are used unless special gasket material and design are used. We have American engines now using the aluminum head very satisfactorily with a 6.5 to 1 compression ratio. The Rolls-Royce uses an aluminum head with a 4.75 to 1 compression ratio which would seem to be rather low; however, the bore of the Rolls-Royce is 4¼ inches and it is a valve-in-head engine.

Road Tests vs. Laboratory Tests

In the report by the Ethyl Gasoline Corp., "Correlation of Knock-Testing Engine Ratings with Knocking in Automobile Engines," it is evident that, owing to the variance in knocking in actual road tests, the highest octane number on the laboratory engine may not give the best results under actual road testing conditions. Hence, the winner of the race for higher octane numbers might win in the laboratory test engine, but would lose to a lower octane laboratory engine rating on road tests.

Increasing the compression ratio of our motor car engines has improved their performance and combined with that improvement in design, many other features of major importance have greatly improved the motor car of today as compared with earlier models. The increase in compression ratios was made possible by the advent of Ethyl Gasoline. Undoubtedly compression ratios will be increased somewhat above the present figures and there will continue to be a demand for Ethyl Gasoline or a fuel containing a comparable antiknock ingredient.

Recent comparisons of tests may result in a different view being taken toward the necessity of very high octane numbers, as other features in connection with the fuel are involved. The curves of Figure 3 reveal the tendency to converge upon a common point, indicating that while considerable change has occurred, future increases in compression ratio will not be advanced greatly. Improvements in design and use of different materials for cylinder heads proves that compression ratios as high as 6.5 to 1 can be used without the necessity of going to unusually high octane numbers for the motor fuel.

In view of changes in design and materials used in some of our recent engines, which indicate the possibility of increased activity in that respect combined with the variance in actual road tests, it is evident that improvement in testing features are needed and that the motor manufacturers are working on their problems to improve the situation. Therefore, it would appear questionable if refiners should go to greater expense, at this time, on a subject that is in need of further development.

PRODUCTION DECLINES BUT STOCKS FURTHER INCREASE

According to reports received by the Bureau of Mines, Department of Commerce, the production of crude petroleum in the United States during February, 1932, amounted to 62,484,000 bbls. This represents a daily average output of 2,155,000 bbls., which is slightly under the daily average recorded in January (2,158,000 bbls.) and is 11,000 bbls. below the daily average output of a year ago. A total of 325 wells, with an aggregate daily initial of more than 1,000,000 bbls., was completed in the East Texas Field in February but the daily average output for that month fell below that of January. This was due to the inauguration of a Sunday shut-down program by the principal operators and to the fact that the allowable production per well per day was reduced. Production in California continued steady at just above 500,000 bbls. daily; that in Oklahoma again declined, due to a material drop in the Oklahoma City Field.

The production and consumption of crude virtually balanced in February and crude stocks only showed a slight increase. This contrasts with January, when the output declined faster than runs to stills and stocks were reduced.

Imports of crude petroleum showed a material increase and the daily average total new supply showed a gain of 102,000 bbls. over January. Stocks of all oils increased 1,098,000 bbls. and totaled 633,128,000 bbls. on February 29.

Refined Products

Daily average crude runs to stills in February amounted to 2,201,000 bbls., compared with 2,217,000 bbls. daily in January. The February figure represents a decline of 6 per cent from crude runs of a year ago.

Due to increased cracking, the percentage yield of gasoline in February rose to 46.0 per cent, the highest ever recorded. As a result, the daily average output of motor fuel rose from 1,082,000 bbls. in January to 1,095,000 bbls. daily in February. The daily average domestic demand for motor fuel increased slightly over January, but this was compensated by an almost equal decline in exports. The daily average domestic demand for motor fuel in February amounted to 880,000 bbls., which, compared with a year ago, represents a decline of 5.5 per cent. Stocks of motor fuel, including terminal and transit stocks, continued to increase rapidly and on February 29 totaled 61,964,000 bbls., an increase of 4,602,000 bbls. over stocks on hand January 31. At the current rate of total demand, the February stocks represent 63 days' supply, compared with 59 days' supply on hand a month ago.

The refinery data of this report were compiled from schedules of 338 refineries, with an aggregate daily recorded crude-oil capacity of 3,674,470 bbls., covering, as far as the bureau is able to determine, all operations during February, 1932. These refineries operated during February at 60 per cent of their recorded capacity, give above, as compared with 342 refineries operating at 60 per cent of their capacity in January.

LOCKE NEW PRESIDENT WESTERN REFINERIES

(Continued from Page 13)

president, Shell Petroleum Corp., St. Louis, Mo.; A. E. Landsittel, vice president, Globe Oil & Refining Co., Tulsa; C. M. Boggs, president, Kanotex Refining Co., Arkansas City, Kans.; C. B. Wrightsman, president, Standard Oil Co. of Kansas, Neodesha, Kans.; D. P. Hamilton, president, Root Refining Co., Inc., Shreveport, La.; E. S. Karstedt, vice president, Continental Oil Co., Ponca City, Okla.; H. H. Trower, vice president, Phillips Petroleum Co., Bartlesville, Okla.; L. H. Prichard, president, Anderson-Prichard Oil Corp., Oklahoma City, Okla.; L. B. McCammon, vice president, Marathon Oil Co., Tulsa; R. W. McDowell, vice president, Mid-Continent Petroleum Corp., Tulsa; B. H. Gray, vice president, Spartan Refining Co., Inc., Shreveport, La.; R. R. Irwin, president, White Eagle Oil Corp., Kansas City, Mo.; L. B. Simmons, president, Rock Island Refining Co., Duncan, Okla.; Sheldon Clark, vice president, Sinclair Refining Co., Chicago, Ill.; D. J. Moran, president, Continental Oil Co., Ponca City, Okla.; John L. Gray, vice president, Deep Rock Oil Corp., Tulsa; A. L. Derby, president, Derby Oil Co., Wichita, Kans.; T. T. Eason, president, Eason Oil Co., Enid, Okla.; L. E. Phillips, vice president, Phillips Petroleum Co., Bartlesville, Okla.; Rex Winget, manager, Cushing Refining & Gasoline Co., Cushing, Okla.; W. G. Skelly, president, Skelly Oil Co., Tulsa; D. W. Harris, vice president, Louisiana Oil Refining Corp., Shreveport, La.

The following former presidents of the association are ex-officio members of the board of directors: George Moore, Cosden Oil Co., Fort Worth, Tex.; Roy Jones, president, Panhandle Refining Co., Wichita Falls, Tex.; P. M. Miskell, manager of refining and marketing departments, Empire Oil & Refining Co., and D. W. Moffitt, retired, Tulsa.

THOMAS HAYS DIES

Thomas Hays, personal representative of the Union Oil Co. in the San Francisco Bay region, died in a San Francisco hospital during the past week.

TULSA OIL CO. OFFICES

Offices of the Tulsa Oil Co., subsidiary of the Standard Oil Co. of Kansas, have been moved to Wichita, Kans., headquarters of the Kansas company.

MOTOR FUEL NEEDS SPUR RESEARCH WORK

(Continued from Page 22)

gasoline from the crude processed, can be marketed at the premium price for antiknock fuel.

By reforming, the refiner will be able to dispose of all his straightrun gasoline in face of the continuous increase in octane number requirements for gasoline. The reforming operation in most instances, is the only possible way of bringing the quality of straightrun gasoline and naphtha within the range of a commercial product. With the establishing of a 78 octane number for the premium grade gasoline a base fuel of 59-60 octane number is required for ethylizing to produce this premium fuel.

Specifications on Products

Some concrete and specific results obtained when reforming low quality gasoline is no doubt of interest. In the following table, results set forth were obtained from the commercial cracking of Pennsylvania gasoline and heavy naphtha:

Charge—	Per cent— Gasoline	Naphtha
Cracked gasoline	83.7	84.4
Residue	5.4	4.8
Gas and loss	10.9	10.8
Total	100.0	100.0
Gas, cu. ft. per bbl. of charge	346	295
Charge Stock		
Gravity	58.7	52.7
I.B.P., °F.	120	198
10%	200	282
20%	230	307
30%	252	322
40%	270	335
50%	289	348
60%	308	363
70%	330	380
80%	364	406
90%	426	453
Octane number	40	30
Cracked Gasoline		
Gravity	68.5	64.4
I.B.P., °F.	78	78
20%	158	168
50%	216	243
90%	275	313
Endpoint	297	331
Octane number	76	76
Residue		
Gravity	3.0	4.0
Flash, °F.	155	150
Fire, °F.	170	175
Saybolt vis. at 210° F.	*50	*50
Cold test, °F.	−20	−15

*Seconds.

No treating difficulties have been encountered when reforming straightrun gasoline or naphtha. Usually, the product from Pennsylvania gasolines and naphthas have required little or no treatment. The table below shows the tests on the cracked unstabilized gasoline made from Pennsylvania naphtha as produced from the unit:

Gravity	68.1
I.B.P.	78°F.
20%	158
50%	216
90%	275
E.P.	296
Octane number	76
Gum (copper dish)	61 mgs.
Vapor pressure	17.6

Some laboratory results, based on once through operation (without recycling) are shown in Curve No. 1. It will be observed that as the pressure is increased for a given yield, the octane number increases with pressure. Furthermore, at a given pressure, octane number is increased at the expense of yield. These curves are from laboratory data and are intended to show only the trend and not the actual yields for various octane numbers. As will be noted these results show considerably lower yields than given previously on commercial plants where recycling is employed.

Assuming that you are primarily interested in a reforming unit, no attempt has been made in this paper to show how a gas recovery and stabilizing unit, or crude topping unit could be tied in with the reforming unit. However, any one or all of these units can be tied in with the reforming unit in such a way as to meet your particular problems.

Brief Items for Petroleum Refiners

Mid-West Section A.C.S. Announces St. Louis Program

Midwest members of the American Chemical Society will meet in St. Louis for their annual sectional meeting May 5, 6 and 7. Papers of unusual merit will be provided for the petroleum division and these will cover problems of immediate interest to refiners and natural gasoline plant operators. The program, as announced, appears below:

Technical Papers—Petroleum Group

"Entrainment as a Factor in the Design of Fractionating Columns," by Mott Souders, Jr., and G. C. Brown of University of Michigan.

"Problems in Fractionation," by Prof. D. B. Keyes, University of Illinois.

"Properties of Hydrocarbon Mixtures at High Temperatures and Pressures," by Dr. W. H. Bahlke of the Standard Oil Co. of Indiana.

"Cracking Hydrocarbons," by Dr. Gustav Egloff of the Universal Oil Products Co.

"Refining Petroleum Distillates," by Dr. J. C. Morrell of the Universal Oil Products Co.

"Utilization of Modern Motor Fuels," by Wheeler G. Lovell of the General Motors Corp.

"Research on Petroleum at Penn State," by Dr. F. C. Whitmore.

"Thermal Decomposition of Hydrocarbons," by F. E. Frey of Phillips Petroleum Co.

Prof. W. L. Nelson of the University of Tulsa will also give a paper, subject to be announced later.

Prof. L. V. Redmond will be present and will be the speaker at the meeting on Friday evening, May 6, to which the public will be invited.

A committee of ladies from the St. Louis section will look after the entertainment of all visiting ladies.

The general program of the meeting follows:

Thursday, May 5

Registration in forenoon at the Hotel Coronado.

Informal luncheon at noon.

Executive committee meeting at noon.

Papers of general interest in the afternoon.

Banquet in the evening as guests of the St. Louis section with entertainment guaranteed to be enjoyable.

Friday, May 6

Both morning and afternoon sessions will be devoted to the group meetings in petroleum, pharmaceuticals, corn products and chemical education.

Public meeting at 7:30 p. m. to be addressed by Dr. L. V. Redmond, president of the A.C.S.

Saturday, May 7

Inspection trips in the morning to various industries in the St. Louis area.

The meeting will be in the Coronado Hotel. The hotel is making a reduced rate of $2.50 per person whether in single or double room and regardless of the location of the room. The earliest reservations will be given the choice of rooms.

RECEIVER NAMED FOR O'BAR

AUSTIN, Tex., Apr. 11.—Atty. Gen. James V. Allred of Texas has filed a suit in district court here for $4,145.20, due the State, he asserts, in gasoline taxes, against partners in the O'Bar Refinery, Coleman. On his application, District Judge J. D. Moore named O. A. Newman of Coleman receiver for the refinery. The petition listed as partners in the refinery Howard Samuel, T. E. Brown, Leon L. Shield and V. F. Ekholm of Coleman.

TIDE WATER AWARDS REFINERY PRIZES

NEW YORK, Apr. 9.—The Central Suggestions Committee of the Tide Water Oil Co. has announced prize awards for 1931 to workers at the company's Bayonne refinery.

First prize of $150 went to Manus Gallagher of the crude and fuel pumpers who, while a member of the labor department, suggested that a gathering line be installed from the finished lubricating oil tanks in Yard No. 2, so that when the tanks were to be cleaned the bottoms might be pumped to special tanks at the compound or sent to the P. and L. reducing stills for rerunning. Previous to the adoption of this suggestion while these tanks were being cleaned, large quantities of finished lub oil were taken from these tanks in drums and dumped on the slop pond to be picked up, settled and rerun in stills in Yard No. 1. The suggestion reduced to a minimum the labor cost of cleaning these tanks and the value of the reclaimed oil reached an appreciable amount.

Second prize of $125 went to Carl Lewis of the plate shop, who suggested that the crane be used to pull leaking tubes from the bundles used in heat exchangers. To remove such tubes it was necessary to drive each one out of position, the entire length of the exchanger by hand labor, the men working in relays. The cost was correspondingly high, depending on the number of tubes to be replaced. With the crane method, the end of each tube to be replaced is tapped to take a special eyebolt. The crane then pulls each tube completely through the bundle requiring about five minutes for each tube, and the savings realized depend upon the number of exchangers to be repaired.

Third prize of $50 went to Fred Garrison of Yard No. 1 stills, who suggested the installation of a pump near the gas plant for handling the gas oil from crude unit No. 2 to relieve the burden placed upon pumphouse "A". When the crude unit was started the volume of stock to be taken care of by the pumphouse and the difficulty in pumping almost made necessary the installation of an additional line. With the adoption of Garrison's suggestion, this stock is now handled directly by the pumps at the gas plant without going through the manifolds either at the lower manifolds in yard No. 1 or pumphouse "A".

William Swiek of the Cracking Coils tied for third prize, his suggestion being the elimination of a coking condition in the 4-inch feed line from the soaking drums to the separator and prevented the draining of the secondary tower when turning around the coil. Because of the coke accumulation it was necessary to remove several fittings and pick this coke out by hand, which delayed the steaming operation and created an additional labor expense. The winning suggestion provided that a 6-inch uniform length of pipe be extended down to the baffle inside the separator, which resulted in the elimination of the trouble.

DISCONTINUE OPERATIONS

The Standard Oil Co. of Indiana has announced its decision to discontinue the operation of its refinery at Laramie, Wyo., due to present economical conditions. The plant has been operated at a loss for a number of years. Products heretofore supplied from Laramie will be shipped from the Casper plants and all of the older employes will be given part-time positions at Casper. Those with comparative short time service records will be given 30 days' compensation.

FINDS WASTE REFINERY CLAY IMPROVES CEMENT

SAN FRANCISCO, Calif., Apr. 11.—Discovery that spent clay used in oil refining may be turned to account in improving the quality of Portland cement is expected to prove of great value to the building industry and to afford a market for what hitherto has been a waste product. J. M. Evans, of the Associated Oil Co.'s research department, is credited with the discovery that 3 to 5 per cent of this clay introduced into Portland cement increases plasticity and strength and makes it more waterproof. The spent clay is ground into the cement at the time of manufacture.

The greater plasticity of the cement makes it possible to spread it more easily and get a smoother finish. The waterproofing is valuable in stucco work, in foundations and under any conditions of moisture. When increased tensile and compressive strength can also be provided, an all-purpose product is the result.

REFINERS BENEFITED BY REDUCED CARRIER RATES

OIL CITY, Pa., Apr. 11.—Refiners in the Oil City district are benefiting through recent reductions in rail and motor truck rates for both long and short hauls. Reductions in motor truck rates out of Oil City for gasoline in tank trucks and for lubricating oil in packages was followed by a short haul reduction in rail rates. Within a radius of 90 miles of Oil City the railroads have lowered transportation charges on gasoline, refined oil and refined oil distillates to meet motor truck competition.

More recently reduced rail rates were granted on crude oil, fuel oil and gas oil from Oil City to the New England territory, enabling local refiners to compete with East Coast refiners for the New England trade.

ITALIAN REFINERIES EXTEND OPERATIONS

NEW YORK, Apr. 9.—Italian refineries materially expanded their operations during 1931, according to government statistics covering Italy's petroleum trade last year.

While imports of refined products into Italy in 1931 decreased 36,015 metric tons, crude oil imports increased 5,706 metric tons.

Total imports of petroleum into Italy during the past two years were as follows:

	Metric tons	
	1931	1930
Crude	84,443	78,742
Gasoline	316,388	334,334
Kerosene	122,892	130,430
Lub oil	60,594	72,109
Miscellaneous	2,202	2,218

FASTNOW IS GENERAL MANAGER

WICHITA FALLS, Tex., Apr. 11.—J. C. Fastnow has been made general manager of the American Refining properties to succeed E. H. Eddleman, who resigned in December to become executive vice president of the Texas Oil & Gas Conservation Association. A. W. King, manager of real estate since the properties went into receivership, was made assistant manager.

INCORPORATE PROCESS FIRM

The Vapor Treating Processes, Inc., a new subsidiary company has been incorporated recently by Richfield Oil Co. for the purpose of taking out and licensing the Lachman process, a refining process developed by the Richfield research department. The process uses zinc chloride in the treatment of gasoline.

Refinery Men Kept At Work by System Of Changing Jobs

WASHINGTON, D. C., Apr. 11.—How an oil company spread work among its employes is told in a report prepared for the President's Organization on Unemployment Relief. Shorter hours per day or week, staggering of shifts, shorter shifts in continuous operation, rotation of days off, and similar expedients have proven successful in many industries, the report shows.

The Pan American Petroleum & Transport Co. has spread employment in its refineries in New Orleans, Savannah and Baltimore during slack seasons through the past three winters. In the winter months of 1931 and 1932, it was found possible to retain approximately the same number of employes as in 1929 with earnings from 60 to 75 per cent of normal. The refineries manufacture asphalt from petroleum.

In the fall when shipments begin to decrease, manufacturing operations are continued at that rate of production which is considered most economical, until the storage tanks are filled with the various grades of asphalt desired for the winter shipments. After this has been accomplished, the stills are shut down and the operating crew is transferred to the maintenance and shipping departments. The wages per hour depend upon the job done. For example, if a still man's helper is transferred to the job of laborer he is given the labor rate while doing that kind of work. If he is made a pipefitter's helper he is given the same rate as the other pipefitters' helpers.

During the winter the plant is put into first-class operating condition with nearly all the men working on maintenance jobs. However, if there is not enough work to keep all the men busy full time, a part-time schedule is arranged and the amount of time worked per week depends upon the amount of work available. If it is decided that there is work enough to keep all the men busy four days a week, the schedule is arranged so that everyone works that amount of time. The clerical force and plant executives at each refinery are not affected by the plan as their duties are unchanged by curtailed operations. Unskilled laborers required during the rush summer season (about 10 per cent of the permanent pay roll) are not included in the scheme.

NAPH-SOL IMPROVEMENTS

MUSKEGON, Mich., Apr. 11.—Additions and improvements to the Naph-Sol Refining Co. plant at Muskegon, Mich., will be completed about April 20, it was stated today by Walter E. Anderson, president.

A fire which destroyed an old shell still during the progress of present plant expansion necessitated the installation of a new 500-bbl. rerun still in addition to the erection of a new pipe still with a rated capacity of 2,000 bbls. a day which was nearing completion at the time of the fire but was uninjured.

COUTTS REFINERY INSTALLATION

CHATHAM, Ontario, Apr. 9.—Alterations to the existing plant of Northwest Stellarene Co. at Coutts, Alberta, now being made at an estimated cost of $200,000, will be supplemented by installation of a 1,000-bbl. cracking plant at a cost of $50,000, according to announcement of R. J. Lindsey, vice president of the Hope Engineering Co. of Mount Vernon, Ohio. Preliminary work is now under way on the new unit, which will provide a new outlet for fuel oil.

Manufacture of Natural Gasoline

"Nuisance Value" of Natural Gasoline Is Topic of Discussion

EXCELSIOR SPRINGS, Mo., Apr. 7. The "nuisance value" of natural gasoline came in for discussion at the sessions of the technical group of the Western Petroleum Refiners Association which held its twentieth annual meeting here this afternoon. The new expression was coined by Emby Kaye, manager of the manufacturing department of the Skelly Oil Co., who presented a paper on "Future Value of Natural Gasoline to the Refiners." Mr. Kaye's paper is published elsewhere in this issue.

Nuisance value as explained by Mr. Kaye refers to that value which natural gasoline has when there are not normal outlets for the product and it is necessary to get rid of it some way with the minimum bearish affect on the refinery market. This has been indicative of the value of natural gasoline in the Mid-Continent over the greater part of the past several months. Mr. Kaye and other speakers explained that when there was not the usual buying of the regular natural gasoline grades to blend with refinery gasolines, prices were depressed and the product came on the market at distress prices which tend to depress refinery gasolines. The tendency in recent months to superstabilize the regular natural gasoline grades to under 12 pounds vapor pressure to be sold as finished motor fuel was pointed out. This motor fuel has been sold in direct competition with refinery gasolines.

Lower transportation costs were emphasized by speakers as one method of making natural gasoline more attractive to refinery and jobber buyers. Blending of refinery gasolines and natural gasolines at bulk stations rather than at refineries whenever possible was advocated. It was explained this plan not only lowered the transportation cost but also reduced evaporation losses.

One of the large manufacturers in the Mid-Continent is moving part of its natural gasoline by blending with crude oil and shipping to its refineries by pipe line. The natural gasoline is recovered in a crude oil topping operation at the refinery. If the refinery has an efficient gas recovery system it was stated that this operation resulted in a substantial saving in the delivered cost of the natural gasoline at the refinery.

OPERATING LISBON PLANT

Lisbon Gasoline Co.'s eight-unit casinghead gasoline plant on the E. E. Morris farm in the J. Cadena Survey, southern Joiner area, Rusk County, is processing 2,000,000 feet of gas per day, shipping out the gasoline from loading rack on the I.&G.N. Railroad at Poindexter Switch. A 2½-inch line connects the plant with this loading rack. The plant has been in operation since February 28. The company's general offices are in Shreveport. Jess White is superintendent of the plant, which is near Carlyle.

GULF LAYING LINES

The Gulf Production Co. is laying 21 or 22 miles of 2, 4 and 6-inch residue gas line from its gas plant near Overton, to connect with leases of the company, the residue gas to be used in drilling and producing said leases. The 2-inch line will be welded, the 4-inch Victaulic coupled and the 6-inch welded. Pipe in this line is second-hand pipe and second-hand casing. The company is doing its own work on the line.

CHANGE TO AIR-BUTANE PLANT INVOLVES MUCH READJUSTMENT

With the recent completion of an air-butane plant in El Centro, Calif., by the Natural Gas Corp. of California, replacing oil-gas service, the adjustment of all appliances to meet the changed conditions involved problems not encountered in the now familiar changeover to natural gas. The new difficulties arose from the quantity of air already mixed with the gas before air-butane enters the burner throat.

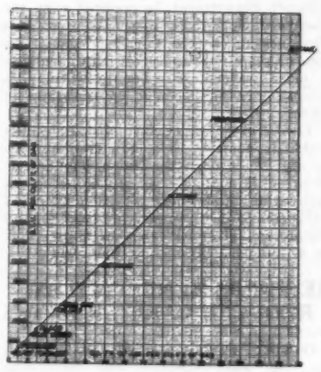


Figure 1—Curve showing volume of air needed for complete combustion of various gases.

R. L. Hayden, manager of the Imperial district of the Natural Gas Corp. of California, describes in the April issue of Western Gas the methods adopted to accomplish efficient appliance operation.

"As can be seen from Figure 1," says Mr. Hayden, "manufactured gas requires less air to complete combustion than natural gas, while natural gas requires less than is necessary for the burning of pure propane and butane gas which ordinarily has a B.t.u. value of approximately 3,200. During the carburetion process at the plant substantially five volumes of air are mixed with one volume of vapor in reducing the heat content of the gas to 550 B.t.u. per cubic foot. While practically the same proportion of additional air is required at the appliance as in the case of manufactured gas, the effect of the higher gravity of the air-butane is to entrain excessive quantities of primary air. Therefore, instead of changing the orifice design to insure the maximum amount of primary air, it is necessary to accomplish the opposite result.

"The most satisfactory solution of this problem of adjustment has been found through the use of brass speed reducing tips or spuds. As shown in Figure 2, these are designed to cut down the exit velocity of the flowing gas stream and change the location of the discharge in the mixing tube throat, thereby reducing the efficiency of the mixing tube as an air-inspirating device and making the accurate control of primary air more simple. Their construction also makes it possible for the adjuster to quickly cut them off where he finds they are eliminating too much air to give efficient operation in individual cases.

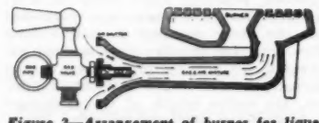


Figure 2—Arrangement of burner for liquefied gases.

Rate of Flame Propagation Reduced

"The rate of flame propagation of air-butane gas is approximately half that of ordinary manufactured gas, which makes it necessary to ream the ports of all burners; otherwise the exit velocity will be too great with the result that the flame will blow off and not remain ignited. In the case of new burners especially designed for air-butane gas, raised burner ports have been found advantageous because the longer port channel prevents flash back. From three-sixteenths to one-quarter inch are proving the most satisfactory thickness for practical use.

"These speed-reducing tips have made possible the complete satisfactory adjustments of the oil manufactured gas appliances for air-butane gas in the El Centro district at a minimum expense to the gas company. For most space heaters, new burners had to be installed. In the majority of cases it was found sufficient to raise the burners of the water heaters.

"Some sections of the El Centro distribution system are low pressure and this has made the accurate adjustment of all appliances more important than ever, as this new gas allows for very little variance in pressure at the burner. This is due to the fact that if the pressure is low, there is insufficient gas, while if the pressure is too high, it will blow the flame off the burner. Regulator adjustments have been made so as to maintain a pressure of approximately 7 inches at the appliance.

Flame Temperature Lower

"Flame temperature of the new air-butane gas is slightly lower than that of the oil manufactured gas, but the variance is so small as to make little appreciable difference in actual operation. The air-butane flame temperature is around 1,600° F., compared to 1,800° F. for manufactured gas, and is about equivalent to that of straight natural gas. It has been found by laboratory tests that the air-butane flame reaches its hottest temperature when it is burning a sharp blue flame with just a bare red tip, and adjustments have been made accordingly. The air-butane flame is much shorter than that of straight natural gas.

"In advance of the changeover work, a complete survey of appliances in use in this district was completed in order to assure that all of the necessary material would be on hand for prompt adjustments. A great deal of experimental work was also carried on by Natural Gas Corp. of California to determine the various characteristics of this new gas, as compared to oil manufactured gas. From these tests it was found that appliances adjusted for manufactured gas could not be lighted with air-butane gas, as there was too much air being admitted at the burner. Therefore, to guard

(Continued on Page 63)

NATURAL GASOLINE STOCKS GAIN DESPITE LESSER OUTPUT

The total output of natural gasoline in February, 1932, amounted to 132,200,000 gallons, a daily average of 4,560,000 gallons. Although this was a decline in total output from January, it represented a small gain in daily average production. Production in the majority of the producing districts in February continued at the same rate as in January. The most notable gain in output was recorded in Texas exclusive of the Panhandle. Production of natural gasoline in the East Texas Field, exclusive of the Van Field, continued relatively unimportant. Stocks of natural gasoline continued to increase and amounted to 36,763,000 gallons on February 29.

NATURAL GASOLINE STATISTICS IN FEBRUARY
(Thousands of gallons)

	Natural gasoline: Production Feb., 1932	Production Jan., 1932	Production Feb., 1931	Stocks end of month Feb., 1932	Stocks end of month Jan., 1932	Blended motor fuel February, 1932: Naphtha or Natural gasoline used	Naphtha or other oils used	Stocks end of month
Appalachian	7,200	7,400	7,600	4,852	3,878	48	62	144
Ill., Ky., Ind.	600	600	1,000	311	247	..	..	..
Oklahoma	33,600	36,000	38,900	12,131	11,310	27	62	27
Oklahoma City	6,550	7,700	3,300	1,677	2,105	..	..	..
Osage County	4,000	4,500	5,400	2,617	2,407	3	..	3
Seminole	10,400	10,800	15,300	3,490	3,993	1	..	..
Rest of State	12,700	13,000	14,900	4,347	3,805	23	62	24
Kansas	2,400	2,600	2,600	965	513	17	..	20
Texas	30,100	31,000	36,700	9,746	8,943	36	153	22
Panhandle	14,900	15,600	17,500	4,283	3,240	..	..	..
North Texas	2,200	2,200	3,500	999	957	13	..	1
West Central	7,600	8,100	10,600	3,373	3,665	23	153	21
Rest of State	5,400	5,100	5,100	1,091	1,081	..	..	..
Louisiana	4,400	4,700	4,700	1,341	1,286	9	3	2
Arkansas	1,700	1,700	2,400	221	226	..	..	7
Rocky Mountain	4,700	5,200	4,800	686	649	..	..	..
California	47,500	51,200	53,800	6,508	6,912	..	..	7
Huntington Beach	1,400	1,400	12,300	....	....	..	..	..
Kettleman Hills	12,400	13,500	4,400	....	....	..	..	..
Long Beach	8,900	9,700	1,700	....	....	..	..	..
Santa Fe Springs	8,500	9,400	11,800	....	....	..	..	..
Ventura Avenue	4,200	4,400	9,900	....	....	..	..	..
Rest of State	12,100	12,800	13,700	....	....	..	..	..
Total	132,200	140,400	152,500	36,763	33,974	137	280	229
Daily average	4,560	4,530	5,446	....	....	5	10	..
Total, thousands of bbls.	3,148	3,342	3,631	875	809	3	7	5
Daily average	109	108	125	....	....	..	..	..

AMERADA LOWERS OUTPUT

NEW YORK, Apr. 9.—Production of natural gasoline by Amerada Corp. during 1931 amounted to 19,305,721 gallons, a decline of 3,420,344 gallons from 1930 output, says E. L. DeGolyer, chairman of the board, in his annual report to stockholders.

Amerada Corp. operates seven natural gasoline plants in Oklahoma and Texas.

BUTANE PLANTS FOR STANDBY

Butane plants of the Central States Electric Co. in Clarinda and Missouri Valley, Iowa, will be used as standby service following the expected changeover to natural gas. The exact time for the shift to natural gas has not been announced.

ROCKY MOUNTAIN AREA

(Continued from Page 39)

an immediate revival of interest in prospecting permits in Colorado, Wyoming and other public land states in the Rocky Mountain area. While it is too early to say just what effect it will have on drilling operations, the general opinion is that it will give considerable impetus to wildcatting. The public domain was closed to prospecting on March 13, 1929, by executive order. Protests, litigation and condemnation of the administration at Washington followed, but more conservative oil men looked upon the act in a different light. It was considered by these as a gesture by the Government indicating its policy towards any proper move made by the operators to restrict wildcatting, curtail production and hold the industry within bounds. The significance of the move was misunderstood in some quarters, but in the long run it is believed the President's act was more beneficial than harmful.

The day following publication of the news from Washington more than 30 applicants for permits put in their appearance at the Denver land office, but applications could not be received as the cancellation of the old order had not arrived. On Wednesday, however, instructions had been received to accept applications on the old blank forms in effect before the order of March 13, 1929, with the reservation that the applications were subject to the provisions of the new regulations. On that day 38 applications were filed at the Denver office. Generally, the understanding is that prospecting permits will be issued upon about the same terms as formerly and that drilling may proceed on same, but the permittee must agree in the event of the discovery of a new oil field to the inclusion of his acreage in a unit operation for the entire pool.

When the public domain was closed in 1929, there were more than 100 applications for permits pending in the Denver office, 1,491 at Cheyenne, and others at land offices in all the Rocky Mountain states. Where permits had not been issued, the applications were cancelled. These persons are given 60 days in which to apply for reinstatement. The first day's applications at Denver embraced approximately 100,000 acres.

The action of Secretary Wilbur in reopening the public domain to prospecting is considered, in some quarters, like that closing the land in 1929, to be a gesture of more significance than appears on the surface. It is looked upon as an indication by the administration that it believes the time has arrived to resume wildcatting for new oil pools, to put idle drilling equipment into operation, give employment to idle people and to help in a pronounced movement towards combating the depression.

Weld County

Drilling activity is at a standstill in the Greasewood area, with four wells on production and output averaging 430 bbls. per day.

Reiter-Foster Oil Co.'s No. 1 Johnson-Juhl, C SE SE, Section 14-6n-61, an edge well and the only test drilled to the Dakota, cemented back from a total of 6,918 feet to the base of the Codell sandstone at 6,260-70 feet and shut down for orders. It is planned to rip the 7-inch and test this sand. If nothing of importance develops, the 7-inch will be shot off and pulled and the hole abandoned.

Greeley Oil Co.'s No. 1 Gadbois, C NW NW, Section 25-6n-61, which flowed 127 bbls. when an attempt was made to pull 7-inch to abandon, has shut down for orders with the casing remaining in the hole.

Judge Arlington Taylor, in the District Court at Fort Morgan, rendered a decision in favor of A. C. Grandbouche and C. D. Stock in their suit against the Platte Valley Petroleum Co. to quiet title to 320 acres in Sections 18 and 19-6n-60, to the east of the Greasewood producers. The issues involved hinged around the interpretation of a lease held by the Platte Valley company as to whether it was for a period of one or five years. The court held that the lease lapsed on June 28, 1930, by reason of the fact that a well had not been completed by that date. The Platte Valley company contended that the lease ran for five years and required that a well should be started by the date named. The case will be appealed to the Supreme Court.

Adams County

Hills Dome Development Co.'s No. 1 Hills, SE cor., Section 27-3s-64, near Watkins, is drilling below 4,000 feet in shale carrying sand and fossils and with some gas showing. The 8¼-inch is being carried at 4,000 feet.

Arapahoe County

MacDeb Drilling Co.'s No. 1 Fitzsimmons, near Aurora, is bottomed at 5,961 feet and fishing for underreamer lugs and spear socket. The lugs had been hooked and were coming out of the hole when the fishing string parted.

Jefferson County

Ruby Hill Oil & Gas Co.'s No. 1 Braden, SE cor., Section 24-4s-69, near Denver, is shut down at 4,280 feet waiting for 4¾-inch pipe.

Park County

South Park Oil Co.'s No. 1 Milligan, NE cor., SE, Section 13-8s-76, Jefferson district, is bottomed at 2,700 feet and cleaning out after cementing cave at 2,675 feet with 38 sacks.

Rio Blanco County

California Co.'s No. 1 California-Raven, NW SE, Section 30-2n-102, Rangely Dome, is drilling at 4,698 feet.

WYOMING

The White Eagle Oil Corp.'s contract for the purchase of crude from the Dallas-Derby and Hudson Fields in Fremont County from the Atlantic-Pacific Oil Co. expired on April 1 and was not renewed. It had been taking about 15,000 bbls. per month. Midwest Refining Co.'s contract with the Woodson Oil Co., under which it was taking 1,450 bbls. per month, also expired on that date. An additional market has been developed with the Midwest for one tank car per day and the balance of the production will be taken by the Chicago & Northwestern Railroad for fuel.

Park County

The Frannie Field is being produced at capacity for a test and is averaging better than 2,200 bbls. per day from six wells in the Embar-Tensleep formation. The last well completed, Midwest Refining Co.'s No. 4 Rosenberg, NE NW NE, Section 26-58-98, is averaging 650 bbls. per day. This well will be produced for 65 days and upon the results during the last 10 days of the test will be based a deal for the well.

Weston County

Announcement was made the past week of a deal in the Osage Field which indicates the interest that is being taken in that area. The holdings of Wesco Oil Co., owned in Colorado Springs, were sold to Wayne Sayre and associates. The price was not announced, but it is known to be calculated at more than $2,000 per barrel daily production. The sale included the NE SE and SE NE, Section 13-46-64, and NE NW, Section 24-46-64. There are five producing wells on the NE SE, Section 13. There is no landowners royalty on either tract.

A noticeable increase in drilling activity is taking place in the Osage district. Three new locations were staked the past week. These include the following: Lambie Oil Co.'s No. 8, SW cor. NW, Section 14-46-64, location; General Oil Co.'s No. 1, SW cor. NW, Section 15-46-64, location; and Chadron-Osage Oil Co.'s No. 16, CWL NW SW, Section 14-46-64, digging pits and moving in rig.

Federal Oil Co.'s No. 2, CEL NE SE, Section 15-46-64, is rigging up standard rig, and Egaso Operating Co.'s No. 16, SE cor. NE, Section 17-46-64, is drilling at 350 feet. Tug Oil Co.'s No. 1, NW cor. SW, Section 15-46-64, is feeling for the sand and carrying 5-⅝-inch below 3,100 feet.

Big Horn County

Lovell Dome Association's No. 1 Sheets, SE SE, Section 9-55-96, southeast of the Byron Dome, is a location and work is expected to start shortly. W. P. Lipman, of Portland, Ore., and associates, recently acquired control of government and state leases to the southeast of the Byron Dome aggregating 3,200 acres and will operate as the Lovell Dome Association. The Lipman interests operate under the name of the Diamond Oil Co. in the Kevin-Sunburst Field in Montana where they have 19 wells.

Natrona County

Jarvis & McDonald's No. 1 Government, SE cor., Section 31-30-81, Spindletop Dome, is drilling below 42 feet, at which depth the conductor pipe was set.

Converse County

John Ackard, of Colby, Kans., has returned to Douglas and is preparing to resume on his No. 1 Morton, SE cor., Section 24-33-72, near Douglas. It was bottomed at 1,820 feet when work was suspended for the winter. It had had several small shows of oil.

MONTANA

Carbon County

The Carbon Oil & Gas Co., which recently completed its first well on the Dry Creek Dome in its No. 1 Armstrong, SW cor. NW, Section 7-7s-22, is preparing to put this well on production following the closing of a deal with the Yale Oil Corp., of Billings, for a minimum of 500 bbls. per day. This well was opened a few days ago and made 1,000 bbls. in six hours. It is not known what it will make on a prolonged production test, but shortly after completion it filled 2,000 bbls. of tankage in 16 hours. The Carbon company's No. 1 McMinn, NW SW SW, Section 7, nearly half a mile to the south, is drilling at 3,430 feet.

Ohio Oil Co.'s No. 1 Caldwell, near CEL, Section 12-7s-22, is spudding at 30 feet, and its No. 2 Robinson, C SE SE, Section 3-7s-21, is drilling at 1,663 feet. Same company's No. 2 Montana Industrial, C NW SE, Section 11-7s-21, is drilling at 4,307 feet.

Ohio Oil Co.'s No. 1 Kuchinski, NW SE NE, Section 15-7s-22, Golden Dome, to the east of Dry Creek, is drilling at 5,173 feet. The first and second Frontier sands were dry.

Midland Oil Syndicate's No. 1 Burger, SW cor. NW, Section 24-6s-23, East Bridger, which spudded and shut down, has let contract to A. A. Sosome to complete the well.

Liberty County

California Co.'s No. 1 Ross, NE SE NE, Section 3-33-6e, Utopia district, is drilling at 3,185 feet and carrying the 8¼-inch to set at 3,220 feet. It cut a dry sand at 3,015-60 feet which probably was the Sunburst.

Northland Oil & Gas Co.'s No. 1 Yurman, C SE SW, Section 32-33-5e, Liberty district, cemented cave at 3,815 feet and is cleaning out.

Peoples Oil & Gas Co.'s No. 1 First National Bank, C SE NW, Section 17-36-6e, Bear's Den district, is fishing for pipe at 2,000 feet.

Cascade County

Buscher & Cassidy's No. 1 Johnson, NE cor. SE, Section 19-22-3e, Benton Lake district, set the 6¼-inch at 1,360 feet and is resuming.

Teton County

California Co.'s No. 1 Sullivan, NW NE NW, Section 34-27-7w, Bynum district, is making repairs and preparing to resume at 2,810 feet after being shut down for the winter.

Toole County

Oregon Oil Syndicate's No. 1 Barthelote, SW NE SE, Section 20-36-2e, Barthelote district, is shut down at 2,365 feet for 5-⅛-inch to shut off water in the Sunburst sand at 2,312-15 feet before testing a show of oil in sand at 2,361 feet.

Askalta Oil Co.'s No. 3 Farbo, C SE NE, Section 2-37-4w, Buckley-Border Field, has been delayed in spudding by bad roads which have prevented the moving in of rig.

Valley County

Opheim Oil & Gas Co.'s No. 1, NE, Section 28-37-38, Opheim Dome, has material on the ground for a 2,500-foot test. It is near the Canadian line and in a district where some gas has been found at around 1,200 feet. No adequate structural test has been drilled.

Golden Valley County

Golden Valley Oil Co.'s No. 1, SW SE, Section 26-6n-22, Belmont district, is reported drilling in the Lakota at 3,012 feet.

Gallatin County

Montana Gas & Petroleum Corp.'s No. 1 Adams, SE cor., Section 35-2n-1e, Three Forks district, is drilling at 1,592 feet in what is believed to be the Kootenai. The Ellis, which was expected at 1,000 feet, has not yet been reached.

Pondera County

Bell & Adams' No. 1 Venetz, NE SE NE, Section 31-27-3w, South Pondera, has been delayed by trucks miring up on the way to location.

Yellowstone County

Spokane-Laurel Oil Co.'s No. 1 Nutting, Lot 5, SW SE, Section 30-2s-24, Laurel district, is a location. It will be a joint operation with the Livingston-Laurel Oil Co. The interests have 5,000 acres blocked. Location is 3 miles west of a well drilled by Hardie & Burns, which had some shows in the Frontier at 900 feet, followed by water in the Dakota.

Pipe Line Runs

Average daily pipe line runs for the week ended April 9:

	Bbls.
WYOMING	
Salt Creek	23,810
Badger Basin	50
Big Muddy	1,580
Byron-Garland	600
Dallas-Derby	380
Dutton Creek	70
Elk Basin	580
Ferris	30
Frannie	2,300
Grass Creek	2,020
Hamilton Dome	760
Hudson	420
LaBarge	680
Lance Creek	100
Lost Soldier	2,400
Midway	80
Oregon Basin	630
Osage	1,100
Pilot Butte	30
Rock River	1,700
Poison Spier	30
Teapot	20
Total Wyoming	39,380
MONTANA	
Buckley-Border	640
Cat Creek	890
Dry Creek	190
Kevin-Sunburst	3,430
Lake Basin	60
Pondera	1,520
Total Montana	6,730
COLORADO	
Florence	230
Fort Collins	630
Iles	820
Moffat	730
Orchard	390
Rangely	90
Tow Creek	310
Total Colorado	3,400
NEW MEXICO	
Rattlesnake	675
Hogback	280
Table Mesa	75
Artesia	645
Cap Rock	850
Hobbs	31,188
Jal	835
Lea City	2,010
Eunice	454
Texas Pacific	195
Total New Mexico	37,207
Total Rocky Mountain area	86,717
Total previous week	86,142
Difference	575

CALIFORNIA FIELDS

(Continued from Page 42)

Inglewood Field if substantial production is secured. The Associated Oil Co. failed to secure commercial production in No 5 De Francis in the Dominguez Field as this project, deepened to 4,500 feet, was cutting 90 per cent on a production test concluded during the early part of the past week. No. 6 De Francis is being rigged up to deepen and drilling will be resumed within the next few days at 4,251 feet. The Union is expected to finish three additional wells in this field within the next few weeks.

J. A. ALLAN HONORED

CHATHAM, Ontario, Apr. 9.—Dr. J. A. Allan of Edmonton, professor of geology at the University of Alberta and one of the leading Canadian authorities on petroleum geology in the west, was inducted president of the Canadian Institute of Mining and Metallurgy at its annual meeting in Montreal.

REFINERY AND CRUDE PRICES

Quotations on refined products are for interstate or export movement unless otherwise noted.

GASOLINES

	April 12		April 5	
OKLAHOMA (Group 3)—				
*U. S. Motor	.04½	.04¾	.04⅛	.04⅜
60-62 400	.04⅝	.04¾	.04⅜	.04⅝
64-66 390	.04¾		.04⅜	.04½
64-66 375	.04¾	.05	.04½	.04¾
68-70 350	.05	.05⅛	.04⅝	.04¾
NORTH TEXAS—				
*U. S. Motor	.04¾	.04¾	.04	.04¼
60-62 400	.04½	.04¾	.04¼	.04¾
64-66 390	.04⅝	.04¾	.04⅜	.04½
64-66 375	.04¾		.04½	.04⅝
64-66 360	.04¾	.05	.04⅝	.04⅞
†NORTH LOUISIANA—				
*U. S. Motor	.05		.04⅝	.04¾
60-62 400	.05		.04¾	
†ARKANSAS—				
*U. S. Motor	.05		.04¾	
CHICAGO Based on Okla. (Group 3)—				
*U. S. Motor	.04¼	.04½	.04¼	.04⅜
60-62 400	.04⅜	.04⅝	.04¼	.04½
64-66 375	.04⅝	.04⅞	.04½	.04¾
Aviation fighting grade	.05⅝	.05⅞	.05½	.05¾
68-70 360	.04⅞	.05⅛	.04¾	.05

Octane Ratings—Above quotations cover price ranges on gasoline in which no octane rating is given. In the case of the U. S. Motor and 60-62 400 endpoint grades where an octane rating of 57-65, inclusive, is guaranteed, prices are one-half cent per gallon higher than quotations shown in above tables; where an octane rating of better than 65 is guaranteed, the prices are three-fourths cent higher. In the case of the remaining grades, gasolines of 65 octane rating or higher are quoted one-half cent higher than the quotations shown in above tables. Unless otherwise provided by agreement of buyers and sellers, the Series 30 testing equipment of the Ethyl Gasoline Corp. is recognized as standard in determining octane ratings.

*Present distillation specifications on U. S. Motor gasoline are: 10 per cent evaporated, 167° F. maximum; 50 per cent, 284° F. maximum; 90 per cent, 392° F. maximum; residue not exceeding 2 per cent; maximum vapor pressure, 12 pounds. Additional specification on U. S. Motor gasoline available from bulletins of Bureau of Mines, Washington, D. C.

†For Arkansas, Louisiana and Mississippi delivery.

PENNSYLVANIA (inland refineries)—				
U. S. Motor	.04⅞	.05	.04⅝	.04⅞
60-62 400	.04⅞	.05	.04⅜	.05
64-66 375	.05	.05¼	.05	.05¼
68-70 350	.05½	.05⅝	.05½	.05¾

Octane Ratings—In the case of U. S. Motor and 60-62 400 endpoint grades, same price differentials based on octane ratings as shown in above tables for Oklahoma and other Mid-Continent areas.

CALIFORNIA (domestic movement only)—				
54-58 U. S. Motor	.04½	.05	.04½	.05
58-60 400	.05	.05½	.05	.05½
EAST COAST—				
U. S. Motor, below 65 octane:				
New York (Bayonne)	.05¾		.05¾	
Boston	.06		.06	
Baltimore, Md.	.05¾		.05¾	
Charleston, S. C.	.05¾		.05¾	
U. S. Motor, 65 octane and above:				
New York (Bayonne)	.06	.06½	.06	.06½
Boston	.06¾		.06¾	
Baltimore, Md.	.06	.06¾	.06	.06¾
Charleston, S. C.	.06	.06½	.06	.06½
GULF COAST (domestic)—				
U. S. Motor, 65 octane and above	.05¼	.05½	.05	.05¼
U. S. Motor, below 65 octane number	.05	.05¼	.04¾	.05

NAPHTHAS

OKLAHOMA (Group 3)—	April 12		April 5	
50-52 450 (blending)	.04½	.04⅝	.03⅞	.04⅛
PENNSYLVANIA (inland refineries)—				
50-54 430-450 (blending)	.04¼	.04½	.04¼	.04½
ARKANSAS—				
48-50 450 (blending)	.04⅝	.04¾	.04½	.04¾
CHICAGO Based on Okla. (Group 3)—				
50-52 450 (blending)	.04	.04¼	.03⅞	.04⅛
Cleaners' naphtha, 56-58 gr. 200 i.b.p.-320 e.p.	.06¼	.06½	.06¼	.06½
Lacquer diluent, 180 i.b.p.-250 e.p.	.09¼	.09½	.09¼	.09½
Lacquer dileunt, 140 i.b.p.-200 e.p.	.09¼	.09½	.09¼	.09½
Rubber solvent, 68-70 gr., 100 i.b.p.-300 e.p.	.05	.06	.05	.06
Stoddard solvent, 300 i.b.p.-410 e.p., over 100° flash	.05½	.05¾	.05½	.05¾
Pet. thinner, 290, 300 i.b.p.-415 e.p., over 83° flash	.04¾	.05	.04¾	.05
V.M.&P. naphtha, 56-58 gr., 190-200 i.b.p.-330 e.p.	.05¾	.06	.05¾	.06
Petroleum spirits	.04¼	.04⅝	.04¼	.04⅝

NATURAL GASOLINES

OKLAHOMA (Group 3)—	April 12		April 5	
Grade 18-55	.02⅝	.02¾	.02½	.02¾
Grade 26-70	.02¼	.02½	.02⅛	.02¼
Grade 30-70	.02	.02¼	.02	
NORTH TEXAS—				
Grade 18-55	.02⅝	.02¾	.02½	.02¾
Grade 26-70	.02¼	.02½	.02⅛	.02¼
Grade 30-70	.02	.02¼	.02	
NORTH LOUISIANA—				
Grade 26-70			.02⅜	
CALIFORNIA—				
57-78 375	.04¼	.05	.04¼	.05

Note—Grades 18-55, 26-70 and 30-70 are three of 24 grades adopted by the Natural Gasoline Association of America effective January 1. The grades are based on pounds vapor pressure and amount evaporated at 140° F. See Page 74 of January 7 issue for explanation of new grading system. While not exactly the same specifications apply, Grade 18-55 corresponds to the former Grade A; Grade 26-70 to former Grade AA and Grade 30-70 to former Grade BB.

KEROSENES

(All kerosenes water white)

OKLAHOMA (Group 3)—	April 12		April 5	
41-43	.03½	.03¾	.03¼	.03½
42-44	.03¾	.03⅞	.03⅜	.03⅝
NORTH TEXAS—				
40-41	.03½	.03⅝	.03⅛	.03¼
41-43	.03⅝		.03¼	.03⅜
†NORTH LOUISIANA—				
41-43	.03¾	.03⅞	.03½	.03¾
42-44	.03⅞	.04⅛	.03⅝	
†ARKANSAS—				
41-43	.03⅞		.03½	.03¾
PENNSYLVANIA (inland refineries)—				
45	.04	.04¼	.04	.04¼
46	.04¼	.04⅜	.04¼	.04⅜
47	.04½		.04½	
CHICAGO (Based on Group 3)—				
41-43	.03⅜	.03½	.03⅛	.03¼
42-44	.03½	.03⅝	.03⅛	.03⅜
***CALIFORNIA—**				
38-40 high burning test	.03¾	.04½	.03¾	.04½
NEW YORK (Bayonne, N. J.)—				
41-43	.05¼	.05½	.05¼	.05½
GULF COAST (domestic)—				
41-43 water white	.04¼	.04½	.04¼	.04⅜

*For Pacific Coast consumption.
†For Arkansas, Louisiana and Mississippi delivery.

TRACTOR FUELS*

OKLAHOMA (Group 3)—	April 12		April 5	
39-40 prime white	.02⅜	.02½	.02⅜	.02⅝
38-40 light straw	.02¼	.02⅜	.02¼	.02⅜
NORTH TEXAS—				
38-40 light straw	.02¼	.02½	.02⅛	.02⅜
CHICAGO (Based on Group 3)—				
38-40 light straw	.02⅛	.02¼	.02⅛	.02¼
PENNSYLVANIA (inland refineries)—				
41-43 prime white	.04	.04¼	.04	.04¼

*There are no standard specifications for tractor fuels. Grades commonly sold have flash under 175° F. (open cup) and under 575° F. endpoint and less than .2 per cent sulphur. Tractor fuels are available from all Mid-Continent refining groups at prices in line with the Oklahoma market taking into consideration differentials in freight rates.

FURNACE OILS*

OKLAHOMA (Group 3)—	April 12		April 5	
32-36 straw	.02	.02¼	.02	.02⅛
36-38 straw	.02	.02¼	.02	.02⅛
38-40 straw	.02⅛	.02¼	.02⅛	.02¼
39-41 prime white	.02⅝	.02½	.02⅝	.02½
NORTH TEXAS—				
38-40 straw	.02⅛	.02¼	.02⅛	.02¼
†NORTH LOUISIANA—				
36-40	.02½	.02⅝	.02½	.02⅝
†ARKANSAS—				
32-36	.02½	.02⅝	.02⅜	.02½
CHICAGO (Based on Group 3)—				
32-36 straw	.01⅞	.02	.01⅞	.02
38-40 straw	.02	.02⅛	.02	.02⅛
PENNSYLVANIA (inland refineries)—				
40-41 prime white	.03½	.04	.03½	.04
NEW YORK (Bayonne, N. J.)—				
32-36	.04		.04	
36-40	.05		.05	

*Above prices are for furnace oils of zero cold test, under 190° F. flash and good odor.
†For Arkansas, Louisiana and Mississippi delivery.

GAS OIL, DIESEL OIL AND FUEL OIL

Gas oil (G.O.) quoted per gallon basis; Diesel oil and fuel oil per barrel.

OKLAHOMA (Group 3)—	April 12		April 5	
32-36 (G.O.) cracking stock	.01⅝	.01½	.01⅝	.01½
U.G.I. (G.O.)	.01¼	.01½	.01¼	.01½
32-36, zero to 15 (G.O.) high flash	.01⅝	.01¾	.01⅝	.01¾
28-30, zero to 10	.50	.55	.50	.55
26-30, zero to 10	.45	.50	.45	.50
24-26	.37½	.42½	.37½	.42½
20-22	.32½	.35	.32½	.35
16-20	.27½	.30	.27½	.30
Below 16	.25	.30	.25	.30
NORTH TEXAS—				
32-36 (G.O.) industrial	.01¼	.01⅜	.01¼	
22-26	.40	.42½	.40	
Below 20	.25	.35	.25	.35
†NORTH LOUISIANA—				
32-36 (G.O.) zero	.02¼	.02⅜	.02	.02¼
14-16	.35	.45	.35	.40
†ARKANSAS—				
32-36 (G.O.) zero	.02¼	.02⅜	.02	.02¼
14-16	.35	.45	.35	.40
CHICAGO (Based on Group 3)—				
32-36 (G.O.) industrial	.01⅛	.01¼	.01⅛	.01¼
28-30 (zero)	.52½	.57½	.52½	.57½
22-26	.32½	.37½	.32½	.37½
18-22	.27½	.30	.27½	.30
Below 18	.22½	.25	.22½	.25
PENNSYLVANIA (inland refineries)—				
36-40	.03	.03¼	.03	.03¼

Note—Fuel oils of more than 40 cold test generally 5 to 10 cents per barrel less in all areas than shown in above tables.

†For Arkansas, Louisiana and Mississippi delivery.

CALIFORNIA—				
30-34 (G.O.) per bbl.	.75	.95	.80	1.00
27 plus Diesel	.75	.90	.75	.95
15-19 Bunker (at tidewater)	.55	.75	.55	.75
15-19 Bunker (cargo lots)	.50	.65	.55	.70
15-19 (tank cars)	.40	.70	.40	.70
GULF COAST—				
28-30 (G.O.)	.02⅞	.03	.02¾	.03
Bunker C (bulk cargoes)	.45	.50	.45	.47½
Bunker C (bunkers)	.50		.50	
NEW YORK (Bayonne, N. J.)—				
28 plus (G.O.)	.04		.04	
*28-30 Diesel	1.30		1.30	
†Bunker C	.65		.65	

*Lighterage 6½ cents per barrel.
†Lighterage 5 cents per barrel.

PETROLEUM COKE*

Prices per ton f.o.b. refineries in Chicago area.

	April 12		April 5	
Breeze (screenings)	3.75		3.75	
Still runs	4.75		4.75	
Lump and egg	7.00	7.50	7.00	7.50

*Refiners will absorb freight up to 80 cents a ton.

NEUTRAL OILS

(Viscosity at 100° F. and Color)

OKLAHOMA (Group 3)—	April 12		April 5	
Zero to 10 Cold Test:				
150-3	.06¼	.06½	.06¼	.06½
180-3	.07½	.07¾	.07½	.07¾
180-4	.07	.07¼	.07	.07¼
200-3	.08½		.08½	
200-4	.08	.08¼	.08	.08¼
240-3	.09¾	.10	.09¾	.10
240-4	.09¼	.09½	.09¼	.09½
280-3	.11¼	.11½	.11¼	.11½
280-4	.10¼	.10½	.10¼	.10½
300-3.5	.11¾	.12	.11¾	.12
350-3.5	.12¼	.12½	.12¼	.12½
400-4	.12¾	.13	.12¾	.13
500-4.5	.13¼	.13½	.13¼	.13½
100-2 Paraffin Oil	.04¼	.04½	.04¼	.04½
15-30 Cold Test:				
200-3	.07¾	.08	.07¾	.08
200-4	.07½	.07¾	.07½	.07¾
240-3	.09¼	.09½	.09¼	.09½
240-4	.08¾	.09	.08¾	.09
280-3	.10¾	.11	.10¾	.11
280-4	.09¾	.10	.09¾	.10
PENNSYLVANIA—				
150 vis., No. 3, 400-405:				
Zero pour test	.15	.16	.15	.16
10 pour test	.14	.15	.14	.15
15 pour test	.13½	.14½	.13½	.14½
25 pour test	.12¾	.13¾	.12¾	.13¾
30 pour test	.12¾	.13	.12¾	.13
180 vis. No. 3, 25 pour test	.15¾	.16½	.15¾	.16½
200 vis. No. 3:				
Zero pour test	.22	.23½	.22	.23½
10 pour test	.21	.22	.21	.22
15 pour test	.19½	.20	.19½	.20
25 pour test	.18	.18½	.18	.18½
30 pour test	.17¾	.18	.17¾	.18
36 Miners' Neutral	.05½		.05½	
34 Neutral	.05½		.05½	
34 Sundebloom Neutral	.05		.05	
GULF COAST—				
Pale Oils:				
100-2-2½	.05		.05	
200-3	.06½		.06½	
300-3	.07		.07	
500-3½	.08	.08½	.08	.08½
750-3½	.09	.09½	.09	.09½
1,200-3½	.10½	.11	.10½	.11
2,000-4	.12	.12½	.12	.12½
Red Oils:				
200-5-6	.05	.05½	.05	.05½
300-5-6	.05½	.06	.05½	.06
500-5-6	.06¾	.07	.06¾	.07
1,200-5-6	.09½	.10	.09½	.10

REFINERY AND CRUDE PRICES

Quotations on refined products are for interstate or export movement unless otherwise noted.

2,000-6 plus	.11	.11½	.11	.11½
Amber	.02⅛		.02⅛	
Extra amber	.02⅝		.02⅝	
Cream	.04⅜		.04⅜	
Lily white	.05¾		.05¾	
Snow white	.06¾		.06¾	

EXPORT PRICES

GASOLINE

GULF COAST—	April 12		April 5	
U. S. Motor	.04½	.04¾	.04¼	.04⅜
60-62 400	.04⅝	.05⅞	.04⅝	.04½
61-63 390	.04¾		.04½	
64-66 375	.04¾	.05	.04½	.04⅝
LOS ANGELES, CALIF.—				
U. S. Motor, 53-55 437 e.p.	.03¾	.04¼	.03¾	.04¼
U. S. Motor, 65 octane num.	.05		.05	
U. S. Motor, 67 octane num.	.05¼		.05¼	
U. S. Motor, 69 octane num.	.05½		.05½	
58-62 400 endpoint gasoline.	.04¼		.04¼	

KEROSENE

GULF COAST—				
41-43 prime white	.04¼	.04½	.04	.04⅛
41 water white	.04½	.04⅝	.04¼	.04⅝
LOS ANGELES, CALIF.—				
41-43 water white	.04	.04¾	.04	.04¾

LUBRICANTS

NEW YORK (Bayonne, N. J.)—				
600, steam refined cylinder stocks, in bbls.	.21	.22	.21	.22
650, steam refined	.23½	.24	.23½	.24
600, Pennsylvania flash	.24½	.25	.24½	.25
630, Pennsylvania flash	.27½	.28	.27½	.28
600, Warren E	.23½	.24	.23½	.24
600, Oil City E	.22½	.23	.22½	.23
Light 140-150 Bright Stocks	.30	.31	.30	.31
Dark 140-150 Bright Stocks	.29	.30	.29	.30
CALIFORNIA—				
Pale Oils:				
100-2½-3	.07¾	.08	.08	.08¼
200-2½-3	.07¾	.08	.08	.08¼
300-3-3½	.08¼	.08½	.08½	.08¾
350-3-4	.08¾	.09	.09	.09¼
400-3-4	.09¼	.09¾	.09½	.09¾
530-3-4	.09¾	.10	.10	.10¼
550-3-4	.10¼	.11	.10½	.11
Red Oils:				
200-4½-5	.07¾	.08¼	.08	.08¼
300-5-6	.08¼	.08¾	.08½	.08¾
350-5-6	.09	.09¼	.09	.09¼
400-5-6	.09½	.09¾	.09½	.09¾
450-5-6	.10	.10¼	.10	.10¼
500-5-6	.10½	.11	.10½	.11
600-5-6½	.11½	.12	.11½	.12
700-6½ plus	.12½	.12¾	.12½	.13½
750-6½ plus	.13	.13½	.13	.13½
900-6½ plus	.14½	.14¾	.14½	.14¾
NEW YORK (Bayonne, N. J.)—				
Paraffin Oil:				
25 pale	.10¼		.10¼	
28 pale	.07¼		.07¼	
280 red	.12½		.12½	
250 red	.11½		.11½	
225 red	.10		.10	
200 red	.09¼		.09¼	

BRIGHT STOCKS AND STEAM REFINED STOCKS

OKLAHOMA (Group 3)—	April 12		April 5	
600 light green S.R.	.04½	.06	.04	.06
600 dark green S.R.	.03½	.05	.03	.04½
Bright Stock:				
190-200 D	.22		.20	
150-160 D, 0-10	.19¾	.20	.17¾	.18
150-160 D, 10-25	.19¼	.19½	.17¼	.17½
150-160 D, 25-40	.18¾	.19	.16¾	.17
150-160 E	.18¾	.19	.16¾	.17
PENNSYLVANIA—				
600 S.R.	.12¾	.13½	.12¾	.13½
650 S.R.	.15½	.16	.15½	.16
600 Pennsylvania flash	.16½	.17	.16½	.17
600 D filtered	.21½	.22	.21½	.22
600 E filtered	.15½	.16	.15½	.16
Pennsylvania Grade bright stock: Bright Stock, No. 8 color, 145-50 vis., 210-540-550 flash:				
10 pour test	.25	.26½	.25	.26½
15 pour test	.22	.23	.22	.23
25 pour test	.21	.22	.21	.22
35 pour test	.20½	.21½	.20½	.21½

WAX AND PETROLATUM

(Prices per pound)

OKLAHOMA (Group 3)—	April 12		April 5	
124-126 white crude scale	.01¾	.02	.01¾	.01⅞
PENNSYLVANIA—				
122-124	.02	.02⅛	.02	.02⅛
124-126	.02⅛	.02¼	.02⅛	.02¼
NEW YORK (Bayonne, N. J.)—				
Refined Wax:				
120-122	.02⅞		.02⅞	
125-127	.03⅛		.03⅛	
130-132	.03⅝		.03⅝	
133-135	.04⅛		.04⅛	
135-137	.04¼		.04¼	
Petrolatum in barrels in carload lots:				
Dark Green	.01¾		.01¾	

CRUDE OIL PRICES

OKLAHOMA, KANSAS, NORTH AND EAST CENTRAL TEXAS

East Texas (Apr. 1, 1932)† ..... $ .98
East Texas (April 11, 1932)‡ ..... .98
Corsicana heavy* ..... .64
Other fields ..... See gravity table

†Posted by Magnolia Petroleum Co., Sinclair Refining Co., Panola Pipe Line Co., Tidal Refining Co. and The Texas Company. ‡Gulf Pipe Line Co. and Atlas Pipe Line Co. *Magnolia Petroleum Co.

EASTERN STATES

Joseph Seep Purchasing Agency
(Effective December 16, 1931)

Pennsylvania Grade Oil in National Transit Lines (Bradford Field) (Mar. 14, 1932) $1.82
Pennsylvania Grade Oil in Southwest Pennsylvania Lines 1.55
Penna Grade Oil in Eureka Pipe Line Lines (West Virginia) (Feb. 26, 1932) 1.50
Penna Grade Oil in Buckeye Pipe Line Lines (Mar. 12, 1932) 1.35
Corning Grade Oil in Buckeye Pipe Line Co.'s line (April 12, 1932) ..... .95
Ragland Grade Oil in Cumberland Pipe Lines (Kentucky) (Jan. 10, 1931) ... .60
Wayne district Oil in Cumberland Pipe Lines (April 23, 1931) 1.17

Pennzoil Co.
(Effective March 14, 1932)

Pennsylvania Grade Oil in National Transit Lines:
Group A $1.77
Includes Cochran, Franklin, Hamilton and Doolittle districts.
Group B 1.76
Includes Titusville district.
Group C 1.75
Includes Turkey and Tidiout districts.
Group D 1.74
Includes Bear Creek and Porkey districts.
Group E 1.72
Includes Eldenau, Bull Creek, Rough Run, Carbon, Dipner, Bredin, McJunkin, Jameson, Kennerdell, Emienton, Tiona, Lacy and Kinzua districts.
Price depends on length of pipe line haul to plant at Oil City.

Tide Water Pipe Co.
(Effective March 14, 1932)

Bradford, Pa. $1.82
Allegany, N. Y. 1.82

Pure Oil Co.
(Effective December 16, 1931)

Cabin Creek, W. Va. $1.45
Bradford Hollow, W. Va. 1.45
Kelly's Creek, W. Va. 1.45

TEXAS PANHANDLE

Gray County, Wheeler County and Carson-Hutchinson Counties ..... See gravity table

ROCKY MOUNTAIN STATES

Ohio Oil Co.-Midwest Refining Co.

Iles, light (Aug. 24, 1931) ..... $ .75
Iles, heavy (Aug. 24, 1931) ..... .53
Fort Collins (April 11, 1932) ..... .86
Florence (April 11, 1932) ..... .80
Wellington (April 11, 1932) ..... .76
Greasewood Dome, Colo. (Apr. 11, 1932) 1.00
Dutton Creek (April 11, 1932) ..... .82
Rock Creek, Wyo. (April 11, 1932) 1.00
Frannie, light (Nov. 3, 1931) ..... .61
Frannie, heavy (Nov. 3, 1931) ..... .51
Salt Creek ..... Mid-Continent gravity table
LaBarge ..... Mid-Continent gravity scale
Big Muddy (April 11, 1932) ..... .98
Grass Creek (April 11, 1932) 1.20
Elk Basin (April 11, 1932) 1.20
Lance Creek (April 11, 1932) 1.20
Poison Spider (Mar. 5, 1931) ..... .70
Notches (Mar. 14, 1927) ..... .65
Hudson (June 2, 1931) ..... .65
Lander (Mar. 5, 1931) ..... .49
Rex Lake (Feb. 22, 1930) 1.10
Osage (Apr. 15, 1931) ..... .98
Lost Soldier (April 12, 1932) ..... .80
Hamilton Dome (Nov. 3, 1931) ..... .45
Greybull (April 11, 1932) 1.20
Cat Creek (April 11, 1932) 1.20
Pondera (Nov. 3, 1931) ..... .90
Sunburst, Mont. (April 11, 1932) 1.05
Hogback, N. Mex. (Aug. 24, 1931) .... .80
Border, Mont. 1.55
Red Coulee, Alberta 1.55
Lea County, N. Mex. (Apr. 1, 1932)* .. .65
Dry Creek, Mont. (Aug. 24, 1931) 1.00
Maljamar (Nov. 3, 1931) ..... .45
Artesia-Jackson (Nov. 3, 1931) ..... .50

Note—Salt Creek, Cat Creek, Dry Creek, Dallas-Derby, Hudson, Greybull and Hogback posted by Midwest Refining Co. and remainder by Ohio Oil Co. Both companies posted Grass Creek light and Elk Basin. Lost Soldier posted by Producers & Refiners Corp. Artesia, Jackson and Maljamar posted by Continental Oil Co. Border and Red Coulee posted by Imperial Refining Co. Lea County posted by Humble Oil & Refining Co. Fort Collins, Wellington, Orchard, Florence, Rattlesnake and Table Mesa by Continental Oil Co. Osage posted by Arro Oil & Refining Co.
*Posted by The Texas Company. Humble Oil & Refining Co. met this price effective April 11.

WEST TEXAS

Iatan and Westbrook..Same as North Texas
Crane, Upton, Crockett, Howard, Glasscock, Mitchell, Ector, Winkler and Pecos Counties* ..... $ .65
Lea County, N. Mex. (See Rocky Mountain States).
Toborg, Pecos County, Aug. 25, 1931† .. .25

*Effective April 1, 1932, Magnolia Petroleum Co., The Texas Company. Effective April 11, Humble Oil & Refining Co. and Gulf Pipe Line Co. †Shell Petroleum Corp.

GULF COAST

Grade A and Grade B classifications discontinued by leading buyers.....
.....See gravity table
Jennings, La. (April 11, 1932)* ..... $ .75
Lockport, La...See Gulf Coast gravity table
Refugio, light ..... See gravity table
Refugio, heavy (April 11, 1932)‡ ..... .80
Markham (April 11, 1932)§ .....
.....See Gulf Coast gravity schedule
High Island (April 11, 1932)¶ .....
.....See Gulf Coast gravity schedule

*Gulf Refining Co. †Magnolia Petroleum Co. ‡Humble Oil & Refining Co. §The Texas Company. ¶Yount Lee Pipe Line Co.

NORTH LOUISIANA AND ARKANSAS

Smackover, Ark. (all grades) ..... $ .65
Urania, La. (April 12, 1932) ..... .60
Calion, Ark. (Aug. 22, 1931) ..... .52
East El Dorado, Ark. (April 6, 1932).. .65
Stephens, Ark., below 29° (April 12, 1932) ..... .61
Stephens, Ark., 29° and above (April 12, 1932) ..... .64
Other fields ..... See gravity table

Note—Smackover, all grades, The Texas Company, April 1, 1932; Magnolia Petroleum Co., April 6, 1932; Standard Oil Co. of Louisiana and Gulf Refining Co., April 11, 1932. Urania posted by H. L. Hunt, Inc., and Louisiana Oil Refining Co.; Calion by Gulf

(Continued on Page 62)

CRUDE OIL GRAVITY TABLE

	1 Kansas and Oklahoma	2 North and Central Texas	3 East Central Texas	4 Gray County, Texas	5 Carson and Hutchinson Counties, Texas	6 Salt Creek and LaBarge, Wyoming	7 North Louisiana and Arkansas	8 Gulf Coast (Texas-Louisiana)	9 Cameron Meadows, Louisiana	10 Iowa and Lockport, Louisiana
Below 25 degrees	....	....	$.67	....	....	....	$.68	$.80	$.70	$.80
25-25.9 degrees	....	....	.67	....	....	....	.70	.81	.71	.81
26-26.9 degrees	....	....	.67	....	....	....	.72	.82	.72	.82
27-27.9 degrees	....	....	.67	....	....	....	.74	.83	.73	.83
28-28.9 degrees	....	....	.76	....	....	....	.76	.84	.74	.84
Below 29 degrees	$.76	$.76	....	....	....	$.76	....	....	....	....
29-29.9 degrees	.78	.78	.78	....	....	.78	.78	.85	.75	.85
30-30.9 degrees	.80	.80	.80	....	....	.80	.80	.86	.76	.86
31-31.9 degrees	.82	.82	.82	....	....	.82	.82	.87	.77	.87
32-32.9 degrees	.84	.84	.84	....	....	.84	.84	.88	.78	.88
33-33.9 degrees	.86	.86	.86	....	....	.86	.86	.89	.79	.89
34-34.9 degrees	.88	.88	.88	$.76	$.66	.88	.88	.90	.80	.90
35-35.9 degrees	.90	.90	.90	.78	.68	.90	.90	.91	.81	.91
36-36.9 degrees	.92	.92	.92	.80	.70	.92	.92	.92	.82	.92
37-37.9 degrees	.94	.94	.94	.82	.72	.94	.94	.94	.84	.94
38-38.9 degrees	.96	.96	.96	.84	.74	.94	.96	.96	.86	.96
39-39.9 degrees	.98	.98	.98	.86	.76	.94	.98	.98	.88	.98
40 degrees and over.	1.00	1.00	1.00	.88	.78	.94	1.00	1.00	.90	1.00

Note—Magnolia Petroleum Co.'s prices in Oklahoma, North Texas and Central Texas, effective April 1, are the same as above given in Columns 1 and 2, excepting that the schedule begins with below 28 degrees, 67 cents; 28-28.9 degrees, 76 cents. The Empire Pipe Line Co. met the Magnolia prices in Kansas and Oklahoma; the White Eagle Oil Corp. in Kansas and the Pure Oil Co., in Oklahoma.

Column 1—Effective April 1, 1932, Continental Oil Co. in Oklahoma and Kansas; Barnsdall Refineries, Inc., and Standish Oil Co. (Phillips Petroleum Co.), in Oklahoma and Kansas; Skelly Oil Co., Kanotex Refining Co., Darby Oil Co., Vickers Petroleum Co., in Kansas; Magnolia Petroleum Co. and Pure Oil Co., in Oklahoma (see note above); White Eagle Oil Corp., in Kansas (see note above); The Texas Company in Oklahoma. Effective April 11, 1932, Stanolind Crude Oil Purchasing Co. in Oklahoma and Kansas; Gypsy Oil Co., Mid-Continent Petroleum Corp., Champlin Refining Co., Eason Oil Co., Pepper Gasoline Co. and Carter Oil Co. in Oklahoma. Carter Oil Co.'s schedule begins at below 25 degrees, 68 cents, with 2 cents added for each degree upward.

Column 2—Continental Oil Co., effective April 1, in North Texas only; followed on same day by The Texas Company in North and Central Texas; Magnolia Petroleum Co. in North and Central Texas (see note above); effective April 11, the Humble Oil & Refining Co., Gulf Pipe Line Co. and Stanolind Crude Oil Purchasing Co.

Column 3—Effective April 1, 1932, the Magnolia Petroleum Co.; effective April 11, 1932, Humble Oil & Refining Co.

Column 4—Effective April 1, 1932, Magnolia Petroleum Co.; effective April 2, the Philtex Oil Co. (Phillips Petroleum Co.), but its schedule was carried down to below 30 degrees at 66 cents, with 2 cents added for each degree upward. Effective April 11, other companies met Continental schedule.

Column 5—Effective April 1, 1932, Magnolia Petroleum Co.; effective April 2, Philtex Oil Co., excepting that latter company carried its schedule down to below 30 degrees at 56 cents, with 2 cents added for each degree upward. Effective April 11, other companies met Continental prices.

Column 6—Midwest Refining Co., effective April 11, 1932.

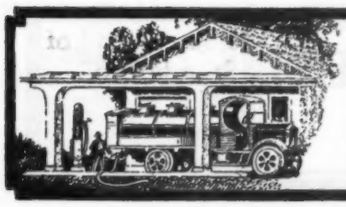
Column 7—The Texas Company, effective April 1, 1932; Magnolia Petroleum Co., effective April 6, 1932; Standard Oil Co. of Louisiana and Gulf Refining Co., effective April 11, 1932.

Column 8—The Texas Company, effective April 1, 1932; Sun Oil Co., April 1, 1932; Humble Oil & Refining Co., effective April 11, 1932; Gulf Pipe Line Co., effective April 11, 1932. Gulf's gravity scale ends with a top of 35 and above at 91 cents.

Column 9—Magnolia Petroleum Co., effective April 6, 1932.

Column 10—Magnolia Petroleum Co., effective April 6, 1932.

(California Crude Oil Prices on Page 66)



TANK WAGON MARKETS

Tank wagon quotations for gasoline and kerosene in United States as furnished by the larger marketing concerns April 12.

ALL TANK WAGON AND SERVICE STATION QUOTATIONS INCLUDE TAXES

STANDARD OIL CO. (INDIANA)

	Gasoline			Kero.
	Tank wagon	Service station	Incl'ds tax of	tank wagon
Chicago	15.0	15.0	3.0	9.0
Decatur, Ill.	15.5	15.5	3.0	9.1
E. St. Louis	14.8	14.8	3.0	8.8
Joliet	15.5	15.5	3.0	9.1
Peoria	15.5	15.5	3.0	9.1
Quincy	15.3	14.2	3.0	8.9
Davenport, Ia.	15.6	15.6	3.0	9.4
Des Moines	15.6	15.6	3.0	8.1
Keokuk	15.6	15.6	3.0	6.4
Sioux City	15.2	15.2	3.0	9.0
Duluth, Minn.	16.6	16.6	3.0	10.0
Mankato	16.2	16.2	3.0	8.1
Minneapolis	16.3	16.3	3.0	10.0
LaCross, Wis.	17.3	17.3	4.0	10.1
Milwaukee	16.2	16.2	4.0	9.0
Madison	16.4	16.4	4.0	9.2
Detroit, Mich.	12.5	12.5	3.0	9.1
Grand Rapids	14 8	14.8	3.0	10.5
Saginaw	13.2	13.2	3.0	10.8
Evansville, Ind.	16.3	15.6	4.0	10.1
Indianapolis	16 3	16.3	4.0	10.1
South Bend	16 8	16.8	4.0	8.1
Fargo, N. D.	18.0	18.0	3.0	12.0
Huron, S. D.	17.4	16.0	4.0	10.8
Sioux Falls	16.9	16.9	4.0	10.5
K. C., Mo.	15.0	15.0	3.0	7.7
Springfield*	15.0	15.0	3.0	7.0
St. Louis*	14.5	14.5	3.0	8.4
St. Joseph	14.6	14.6	3.0	7.6
Wichita, Kans.	13.9	13.9	3.0	6.1
Bartlesville, Ok.	13.1	15.1	4.0	7.1

*State tax 2 cents, remainder city tax.

A third grade of gasoline, "Stanolind Blue," is sold at all major points at a price 1½ cents or more below the price on the regular grade.

Effective November 4 — New dump discount applicable on all grades of gasoline sold from tank wagon. Any tank wagon customer buying 25 gallons or more at one time will be given 1-cent discount per gallon off tank wagon price at time of delivery. Customers not under contract receive no other discount.

Effective January 1—Discounts on Q.D.A. on 500 gallons or more per month throughout territory; Red Crown Ethyl Gasoline, 3 cents off tank wagon price; Red Crown gasoline, 2½ cents off tank wagon price; Stanolind Blue gasoline, 1 cent off tank wagon price. On deliveries of 75,000 gallons or more each classification allowed 1 cent additional discount.

Discounts on resellers authorized agent's agreement; Same amounts as above except made off service station price instead of tank wagon price.

SOUTHWESTERN DISTRICT

Magnolia Petroleum Co.

	Gasoline			Kero.
	Tank wagon	Service station	Incl'ds tax of	tank wagon
Dallas, Tex.	16.0	17.0	4.0	9.0
Fort Worth	16.0	17.0	4.0	8.0
Houston	13.0	16.0	4.0	9.0
San Antonio	15.0	17.0	4.0	8.0
El Paso	14.0	16.0	4.0	11.0
Texarkana	*18.0	18.0	4.0	10.0
Muskogee, Ok.	14.0	16.0	4.0	8.0
Okla. City	14.0	16.0	4.0	8.0
Tulsa	14.0	16.0	4.0	8.0
Ft. Smith, Ark.	*17.5	17.5	5.0	†11.0
Little Rock	*18.5	18.5	6.0	†11.0

One-cent rebate made from posted station prices to cash purchasers in Louisiana, Arkansas and Tennessee.

*Less 2½ cents to dealers. †Less 2 cents to dealers.

PENNSYLVANIA-DELAWARE AND PART OF NEW ENGLAND

Atlantic Refining Co.

	Gasoline			Kero.
	Tank wagon	Service station	Incl'ds tax of	tank wagon
Pittsburgh, Pa.	16.0	17.0	3.0	11.0
Philadelphia	15.0	16.0	3.0	11.0
Scranton	16.0	17.0	3.0	11.0
Allentown	16.0	17.0	3.0	11.0
Altoona	16.0	17.0	3.0	11.0
Erie	16.0	17.0	3.0	11.0
Dover, Del.	16.0	17.0	3.0	11.0
Wilmington	16.0	17.0	3.0	11.0
Springf'd, Mass.	16.0	17.0	3.0	8.5
Worcester	15.8	16.8	3.0	8.5
Boston	15.0	16.0	3.0	9.5
Providence, R.I.	14.0	15.0	3.0	8.5
Hartford, Conn.	15.0	16.0	3.0	10.0
New Haven	15.1	16.1	3.0	10.0

OHIO

Standard Oil Co. (Ohio)

	Gasoline			Kero.
	Tank wagon	Service station	Incl'ds tax of	tank wagon
Ohio points	16.5	17.0	4.0	*12.0

Dealers and commercial accounts 2 cents under tank wagon.

*Service station price 13 cents.

ROCKY MOUNTAIN DISTRICT

Continental Oil Co.

	Gasoline			Kero.
	Tank wagon	Service station	Incl'ds tax of	tank wagon
Denver, Colo.	15.0	18.0	4.0	12.5
Pueblo	15.0	18.0	4.0	12.0
Grand Jctn.	19.0	22.0	4.0	14.5
Casper, Wyo.	15.0	18.0	4.0	10.0
Cheyenne	14.0	17.0	4.0	11.5
Butte, Mont.	17.0	20.0	5.0	16.0
Billings	18.0	21.0	5.0	14.5
Great Falls	20.0	23.0	5.0	16.0
Helena	20.0	23.0	5.0	16.0
Salt Lake, Utah	17.5	20.5	4.0	16.0
Albu'que, N. M.	14.0	17.0	6.0	14.0
Boise, Idaho	†18.0	20.0	5.0	18.0
Twin Falls	19.0	22.0	5.0	18.0

*Two-cent discount off tank wagon to dealers.

†One-cent discount to dealers at time of delivery.

SOUTHERN DISTRICT

Standard Oil Co. (Kentucky)

	Gasoline			Kero.
	Tank wagon	Service station	Incl'ds tax of	tank wagon
Atlanta, Ga.*	21.0	21.0	6.0	9.0
Augusta	21.0	21.0	6.0	14.0
Macon	21.0	21.0	6.0	12.0
Savannah	21.0	21.0	6.0	11.0
Birm'ham, Ala.	20.5	20.5	6.0	12.0
Mobile	22.0	22.0	5.0	10.0
Montgomery	21.5	21.5	6.0	13.5
Jackson, Miss.	18.0	18.0	5.5	10.0
Vicksburg	18.0	18.0	5.0	8.0
Jack'ville, Fla.	10.0	20.0	7.0	10.0
Miami	21.0	21.0	7.0	13.0
Pensacola	21.0	21.0	7.0	13.0
Tampa	20.0	20.0	7.0	11.0
Lexington, Ky.	17.0	18.0	5.0	10.0
Covington	17.0	18.0	5.0	10.0
Louisville	16.5	17.5	5.0	10.0
Corbin	18.0	19.0	5.0	15.0

A third grade "Kyso Green" is sold at a price generally 2 cents below the price on the regular grade.

In addition to the state tax of 4 cents on gasoline, Montgomery has city and county tax of 2 cents on gasoline and one-half cent on kerosene. Kerosene prices in Georgia include 1-cent tax. In Florida, an inspection fee of 0.125 cent; in Alabama, an inspection fee of one-half cent on kerosene and one-fourth cent on gasoline. To Pensacola, Montgomery and Birmingham state taxes add 1-cent tax. To Mobile state tax add 1-cent city tax and 2½ cents county tax.

Effective April 2 price to dealers 2 cents under posted tank wagon price.

*An additional discount of 1 cent is offered to dealers effective October 6.

ATLANTIC COAST DISTRICT

Standard Oil Co. (New Jersey)

	Gasoline			Kero.
	Tank wagon	Service station	Incl'ds tax of	tank wagon
Atl'tic City, N.J.	16.2	16.7	3.0	11.5
Newark	15.2	15.7	3.0	8.5
Annapolis, Mr.	16.7	17.2	4.0	10.0
Baltimore	15.9	16.4	4.0	8.0
Cumberland	17.7	18.2	4.0	12.0
Wash'g'n, D. C.	15.4	14.9	3.0	10.0
Danville, Va.	18.5	19.0	5.0	11.5
Norfolk	17.0	17.5	5.0	10.3
Petersburg	18.0	18.5	5.0	11.3
Richmond	17.0	18.0	5.0	10.7
Roanoke	18.7	19.2	5.0	12.0
Charles'n, W.Va.	17.2	17.7	4.0	11.5
Parkersburg	15.9	16.4	4.0	10.2
Wheeling	17.1	17.6	4.0	11.4
Charlotte, N. C.	19.5	20.0	6.0	10.7
Hickory	20.2	20.8	6.0	12.6
Mt. Airy	20.2	20.7	6.0	12.5
Raleigh	19.9	20.4	6.0	12.2
Salisbury	19.0	19.0	6.0	12.5
Charleston, S.C.	18.0	18.5	6.0	10.3
Columbia	19.9	20.4	6.0	12.2
Spartanburg	20.2	20.7	6.0	12.5

Two and one-half cents per gallon discount off tank wagon price of gasoline to dealers except Washington, D. C., and States of Maryland and New Jersey, where discount is 3½ cents.

Prices shown above are for standard gasolines.

NAPHTHA

	Tank wagon	Tank car
Oleum spirits	10.7	6.23
V.M.P. naphtha	12.7	7.23
Cleaners' naphtha	15.2	9.23
Stanisol	15.2	9.23

Tank wagon prices f.o.b. Chicago January 6, 1932. Each of above prices subject to discount of 1 cent per gallon for 150-gallon lots if covered by contracts.

NEW YORK AND PART OF NEW ENGLAND DISTRICT

Standard Oil Co. (New York)

	Gasoline			Kero.
	Tank wagon	Service station	Incl'ds tax of	tank wagon
Albany, N. Y.	15.5	16.5	3.0	9.5
New York*	14.0	16.0	3.0	9.0
Buffalo	15.5	16 5	3.0	8.5
Rochester	15.5	16.5	3.0	8.5
Syracuse	17.3	17.3	3.0	9.0
Boston, Mass.	15.0	16.0	3.0	8.5
Augusta, Me.	17.3	18.3	4.0	9.0
Manch'tr, N. H.	16 9	17.9	4 0	8.5
Burlington, Vt.	17.8	18.8	4.0	9.5

*Prices in steel barrels.

PACIFIC COAST TERRITORY

Standard Oil Co. of California*

	Gasoline			Kero.
	Tank truck	Posted retail	Incl'ds tax of	tank wagon
Fresno	12.5	16 5	3.0	17.0
San Francisco	12.5	16 5	3.0	15.5
Los Angeles	12.0	16.0	3 0	15.5
Reno, Nev.	16 0	20 0	4 0	19.0
Portland, Ore.	14.0	14.0	4.0	16.5
Seattle, Wash.	15.0	15.0	5.0	16.5
Tacoma	15.0	15.0	5.0	16.5
Spokane	18.5	20.0	5.0	20 5
Phoenix, Ariz.	14.5	17.0	5.0	20.0

Above prices are at company's plant or depots as company does not operate stations. A 4-cent per gallon discount is given dealers and customers taking tank wagon lots except in Phoenix where the discount is 1 cent.

*Retail prices posted by Standard Stations, Inc., a subsidiary.

CENTRAL SOUTH DISTRICT

Standard Oil Co. (Louisiana)

	Gasoline			Kero.
	Tank wagon	Service station	Incl'ds tax of	tank wagon
N. Orleans, La.	18.5	18.5	6.0	†10.0
Baton Rouge	17.5	17.5	5.0	†12.0
Alexandria	18.5	18.5	6.0	10.0
Lafayette*	18.5	18.5	6.0	†10.0
Lake Charles*	18.5	18.5	6.0	†12.0
Shreveport	15.5	15.5	5.0	†12.0
Knoxville, Tenn.	22.0	22.0	7.0	13.5
Memphis	20.0	20.0	7.0	9.0
Chattanooga	21.5	21.5	7.0	11.0
Nashville	21.0	21.0	7.0	12.5
Bristol	20.5	20.5	7.0	14.0
Lt. Rock, Ark.	18.5	18.5	6.0	11.0

*Includes city tax of 1 cent. Louisiana kerosene prices include 1-cent state tax. New Orleans kerosene price also includes 1-cent city tax.

†Kerosene prices in Louisiana include 1 cent tax except New Orleans where tax is 2 cents.

Two-cent discount off gasoline and kerosene tank wagon price to dealer and commercial accounts.

NEBRASKA

Standard Oil Co. (Nebraska)

	Gasoline			Kero.
	Tank wagon	Service station	Incl'ds tax of	tank wagon
Omaha	14 9	15.9	4.0	9.25
McCook	17.0	17.0	4.0	7.5
Norfolk	16.75	17.75	4.0	9.75
N. Platte	17.75	18.75	4.0	10.50
Scottsbluff	17.0	17.0	4.0	9.0

Note — Dealers' discount allowed as follows: Red Crown Ethyl, 3 cents off station price; Red Crown, 2½ cents off normal service station price; Nebraska Blue (third grade), 1 cent off normal service station price.

STANOLIND FURNACE OIL IN CHICAGO

Effective July 1, prices f.o.b. Chicago, tank wagon prices: 1 to 99 gallons, 8 cents; 100 gallons or more, 6 cents.

Stanolex Fuel

Effective May 9, f.o.b. Chicago, tank wagon prices: 1 to 199 gallons, 7 cents; 200 gallons or more, 5 cents. Sinclair met this by bringing down the price of its No. 3.

Fuel Oils

Chicago tank wagon prices (in lots of 400 gallons and over): 38-40 straw distillate, 6 cents; 32-36 gas oil (light zero), 5.5 cents; 32-36 gas oil (industrial), 5.25 cents; 28-30 zero fuel oil, 5 cents; 24-26 fuel oil, 4.25 cents; 18-22 fuel oil, 3.75 cents.

CRUDE OIL PRICE CHANGES

Crude oil price changes in the past week are detailed on Page 18 and in the crude oil price tables on Pages 61 and 62.

TANK WAGON CHANGES

The Continental Oil Co. reduced the gasoline tank wagon and service station prices in Boise, Ida., to 18 and 20 cents from 21 and 24 cents on April 1, with 1-cent discount to dealers at time of delivery. The tank wagon price in Great Falls, Mont., was reduced 1 cent to 20 cents.

The Atlantic Refining Co. March 30 raised the tank wagon and service station prices in Springfield, Mass., to 16 and 17 cents from 14.3 and 15.3 cents.

The Standard Oil Co. of Kentucky made the following changes in tank wagon and service station prices, effective April 1: Atlanta, Ga., 19.5 cents each to 21 cents, with a discount of 1 cent to dealers; Augusta, Ga., 20 and 21 cents to 21 cents each; Macon, Ga., 17 and 18 cents to 21 cents each; Savannah, Ga., 18 and 19 cents to 21 cents each; Mobile, Ala., 20 cents each to 22 cents each.

The Standard Oil Co. of Louisiana, April 8, made a general revision of tank wagon and service station prices in its territory, advancing them 1 cent in New Orleans, Alexandria and Lake Charles, La., to 18.5 cents; Knoxville, Tenn., to 22 cents; and advancing them one-half cent in Baton Rouge, La., to 17.5 cents; Lafayette, La., and Little Rock, Ark., to 18.5 cents (Lafayette price includes 1-cent city tax); Shreveport, La., to 15.5 cents; Memphis, Tenn., to 20 cents; Chattanooga, Tenn., to 21.5 cents; Nashville, Tenn., to 21 cents; Bristol, Tenn., to 18.5 cents.

(Continued on Page 64)

CRUDE OIL PRICES

(Continued from Page 61)

Refining Co.; East El Dorado by Magnolia Petroleum Co., effective April 6, 1932; by Gulf Refining Co., effective April 11, 1932; Stephens, Ark., by Louisiana Oil Refining Co. and Atlantic Oil Producing Co.

SOUTH CENTRAL AND SOUTHWEST TEXAS

Darst Creek (Apr. 1, 1932)*	$ .75
Luling (Apr. 1, 1932)*	.64
Mirando (Apr. 1, 1932)*	.90
Pettus (April 11, 1932)‡	1.00
Salt Flat (April 11, 1932)‡	.75
Thrall§	
Lytton Springs (Lockhart) (Apr. 1, 1932)*	.94
Dobrowolski§	
Same as Mid-Continent gravity scale up to and including 38-38.9°.	
Somerset¶	
Same as Mid-Continent gravity scale up to and including 38-38.9°.	

*Magnolia Petroleum Co., The Texas Company, Humble Oil & Refining Co. posted 80 cents for Mirando, April 11. ‡Thrall prices same as North Central Texas less 19½ cents per cwt. freight. §Grayburg Oil & Refining Co., Pioneer Oil & Refining Co. and Texas Petroleum Products. ‖Pioneer Oil & Refining Co. ‡Humble Oil & Refining Co.

MIDDLE WESTERN STATES

Ohio Oil Co.

(Effective April 11, 1932)

Lima	$1.15
Wooster	1.25
Illinois	1.10
Indiana	.75
Princeton	1.10
Plymouth	Shut in
Western Kentucky	1.05
Midland, Mich. (Oct. 9, 1931)*	.55
Dundee, Mich.†	
Same as Stanolind Crude Oil Purchasing Co.'s Mid-Continent gravity scale	
Upper and Lower Traverse Sands, Mich.†	
....Same as Mid-Continent gravity scale	
Somerset, Ky. (April 12, 1932)	.80
Hart County, Ky. (Jan. 18, 1932)‖	.60

*Posted by Pure Oil Co. †Posted by Standard of Indiana for boat shipment. ‖Posted by Stoll Refining Co. Somerset, Ky., crude purchased by Ashland Refining Co. Ashland, Ky., and delivered through own pipe line.

MEXICO

Panuco*	$ .47

*F.o.b. ship, based on March transactions and exclusive of production and export taxes and bar dues.

CANADA

Ontario (Nov. 3, 1931):	
Petrolia*	$1.90
Oil Springs*	1.97
Alberta (Aug. 24, 1931):	
Turner Valley†:	
Crude oil 45-45.9	2.03
Crude oil 50 and above	2.65
Crude naphtha	3.12
Discolored naphtha	2.83

*Imperial Oil, Ltd. †Imperial Oil, Ltd. and Regal Oil & Refining Co.

AIR-BUTANE PLANT INVOLVES READJUSTMENT

(Continued from Page 58)

against any possible accident, all gas meters were turned off the day of the change, which is also at variance with the situation existing in the changeover from manufactured to natural gas. This necessitated a great deal of extra work and expense on the part of the gas company, which would have been eliminated had the gas been simply turned into the mains and the adjustment work started. However, this safety precaution made possible the completion of this work with no accidents of any kind. To minimize the inconvenience of consumers, the town was divided into eight sections of approximately 200 meters each and adjustments made in one section prior to the turning of the air-butane gas into another section. Regular procedure of the changeover crew on calls and call backs was followed throughout.

Water Presents Difficulty

"The major difficulty encountered in this work was the presence of water or condensation in some parts of the distribution system. Sectionalizing the system for the purpose of converting appliances frequently reversed the direction of gas flow, and this, together with the change in velocity and the condensation in the mains, made poor pressure conditions. For this reason many of the mains had to be cut and temporary drips installed. Condensates remaining in the mains after the conversion will of course disappear within a short period of time, as the air-butane gas is particularly dry.

"All adjustment work at El Centro was carried on under the direction of O. F. Anderson of the Los Angeles Gas & Electric Corp., with H. N. Johnson in charge of commercial and industrial work. They were assisted by an especially trained crew of men secured from Los Angeles Gas & Electric Corp. and Coast Counties Gas & Electric Co. All these men had previously done considerable work in the changeover of appliances from manufactured to natural gas.

"The El Centro plant of the Natural Gas Corp. of California is the largest air-butane plant on the Pacific Coast and was constructed under the direction of A. E. Hall, engineer for Standard Management & Operating Corp. The plant has a capacity of 60,000 cubic feet of gas per hour. There are two 15,000-gallon liquid storage tanks with 90,000 cubic feet of low pressure gas storage capacity and 45,000 cubic feet of high pressure storage. Plans now call for the probable addition of 50,000 additional cubic feet of high pressure storage tanks within the near future.

Gradual Conversion Planned

"This high pressure storage takes care of the high pressure system which is maintained in the commercial and part of the residential section of the community. The gas company also intends to gradually convert most of the El Centro system to high or intermediate pressure.

"The new building is located on the site of the old manufactured gas plant and consists of a galvanized steel structure for the housing of the carbureting and control equipment. Gas is of 550 B.t.u. value, its gravity being 1.17 as compared to about .65 for natural and .4 for manufactured gas.

"The general design of the El Centro plant is the same as in use in other communities by Natural Gas Corp. of California, with the exception of the control equipment. At this plant the mixing is controlled by volume rather than heat unit control. With this type, the equipment is set for a certain percentage of air intake and a set percentage of vapor intake, according to the heat content of the butane vapor which is practically uniform at 3,200 B.t.u. per cubic foot in the liquid used by Natural Gas Corp. of California. Unlike the heat unit control, this unit is stationary until reset by hand, but as vapor supply is obtained by vaporizing liquid drawn from the liquid storage tank, no variation in B.t.u. of sendout is anticipated.

"At the present time there are more than 1,600 meters connected with the El Centro plant. The load reaches its peak during January and February and during this season an average of one carload of butane is used every five days. In the summer many residents leave the Valley and there are only about 1,200 meters in use at that time. The almost complete automatic operation of this new plant will greatly reduce operating expenses and will assure consumers the best type of service during both peak and minimum load periods."

GALLAGHER WELCOMED BY EASTERN OIL MEN

NEW YORK, Apr. 11. — Herbert R. Gallagher, newly elected president of the Consolidated Oil Corp., was welcomed to the East by the oil fraternity of the Atlantic Seaboard at a dinner given in his honor in the Hotel Roosevelt, New York, by W. R. Boyd, Jr., executive vice president of the American Petroleum Institute. The invitation list included some 100 oil company executives.

Mr. Gallagher has been senior vice president and executive officer of the Shell Co. of California, with offices at San Francisco, Calif., since 1910, and assumed his position in New York in March upon completion of merger negotiations between the Sinclair and Prairie interests.

Among those present were the following:

Richard Airey, president, Asiatic Petroleum Corp.; C. B. Ames, vice president, The Texas Company; W. D. Anderson, vice president, Atlantic Refining Co.; C. E. Arnott, president, Socony-Vacuum Oil Co.; H. T. Ashton, president, Lubrite Refining Corp.; C. G. Black, Standard Oil Co. of New Jersey; J. A. Brown, General Petroleum Corp.; D. S. Bushnell, Buckeye Pipe Line Co.; J. W. Carnes, vice president, Consolidated Oil Corp.; A. F. Carter, Shell Eastern Petroleum Products, Inc.; E. M. Clark, director, Standard Oil Co. of New Jersey; Frank Coates, director, H. L. Doherty & Co.; C. E. Crawley, Consolidated Oil Corp.; Henry L. Doherty, president, H. L. Doherty & Co.; O. D. Donnell, president, Ohio Oil Co.; Axtell J. Byles, Tide Water Associated Oil Co.; Fayette B. Dow, American Petroleum Institute; H. B. Earhart, White Star Refining Co.; Harry F. Frueauff, director, Henry L. Doherty & Co.; S. B. Eckert, vice president, Sun Oil Co.; J. Fletcher Farrell, vice president, Consolidated Oil Corp.; W. J. Filer, vice president, Shell Eastern Petroleum Products, Inc.; W. S. Fitzpatrick, vice chairman, Consolidated Oil Corp.; F. B. Fretter, president, National Refining Co.; Herbert Gallagher, president, Consolidated Oil Corp.; John D. Gill, director, Atlantic Refining Co.; Ed S. Hall, general counsel, Standard Oil Co. of New Jersey; W. V. Hartman, vice president, Gulf Refining Co.; C. F. Hatmaker, vice president, Pan American Petroleum & Transport Co.; Eugene Holman, Standard Oil Co. of New Jersey; W. M. Irish, president, Atlantic Refining Co.; E. W. Isom, vice president, Sinclair Refining Co.; Charles L. Jones, vice president, Vacuum Oil Co.; R. S. King, vice president, Vacuum Oil Co.; H. T. Klein, general counsel, The Texas Company; J. F. Lucey, president, Lucey Petroleum Co.; A. G. Maguire, president, Wadhams Oil Co.; L. L. Marcell, chairman, White Eagle Oil & Refining Co.; John H. Markham, Jr.; W. M. O'Connor, vice president, Atlantic Refining Co.; R. Ogarrio, vice president, The Texas Company; Daniel T. Pierce, general counsel, Consolidated Oil Corp.; J. Edgar Pew, vice president, Sun Oil Co.; Arthur Pew, vice president, Sun Oil Co.; Joseph E. Pogue; Frank Phillips, president, Phillips Petroleum Co.; T. Reiber, vice president, The Texas Company; W. S. S. Rodgers, The Texas Company; E. J. Sadler, president, Creole Petroleum Co.; E. L. Shea, vice president, Tide Water Associated Oil Co.; E. W. Sinclair, vice chairman, Consolidated Oil Co.; H. F. Sinclair, chairman, Consolidated Oil Corp.; Peter M. Speer, general counsel, Standard Oil Co. of New York; G. T. Stanford, general counsel, Consolidated Oil Corp.; B. H. Stephens, vice president, Magnolia Petroleum Co.; L. L. Stephens, general counsel, Standard Oil Co. of Indiana; R. G. Stewart, president, Pan American Petroleum & Transport Co.; Chester O. Swain, general counsel, Standard Oil Co. of New Jersey; George H. Taber, Jr., vice president, Sinclair Refining Co.; W. C. Teagle, president, Standard Oil Co. (New Jersey); J. C. VanEck, president, Shell Union Oil Co.; A. E. Watts, vice president, Mexican Sinclair Petroleum Corp.; Earle W. Webb, president, Ethyl Gasoline Corp.; Guy Wellman, counsel, Standard Oil Co. of New Jersey; George P. Whaley, chairman, Vacuum Oil Co.; A. C. Woodman, president, Richfield Oil Corp. of New York.

PHILLIPS OBTAINS LINE FROM SINCLAIR-PRAIRIE

Sinclair Prairie Pipe Line Co. has announced it has sold to the Independent Pipe Line Co., a subsidiary of Phillips Petroleum Co., an 8-inch pipe line running from Earlsboro Field in Seminole County, Oklahoma, to the Oklahoma City Field, a distance of approximately 42 miles. The pipe line is welded and the Independent Pipe Line Co. plans to use the line in its present position.

The Phillips Petroleum Co. has a pipe line now in operation from its Okmulgee refinery to its Knappenberger lease, 1 mile east of Earlsboro, in Section 8-9-5, and the new line purchased from the Sinclair-Prairie will be linked with this line. It will enable the company to handle its own production in the Oklahoma City Field through these pipe lines direct to its refinery. It is believed the company will begin shipping approximately 6,000 bbls. a day, which can be increased when necessary.

The lines cross in Section 16-9-5 where the connection will be made. The Independent Pipe Line Co. has a 4-inch line from Okmulgee to its Earlsboro properties.

GASOLINE CONTRACT IS AWARDED TO RICHFIELD

NEW YORK, Apr. 11.—Richfield Oil Corp. of New York has been awarded a contract by the Navy Department for supplying Eastern and Gulf Coast Navy bases with 2,126,000 gallons of aviation gasoline, constituting a six months' supply. The prices varied according to point of delivery. The gasoline for delivery on this contract will be supplied by the parent California company.

Richfield Oil Co. of California has received a government contract for supplying 250,000 gallons of antiknock gasoline for delivery at March Field, California.

ALBERTA DISTILLATE PRICES

CHATHAM, Ontario, Apr. 9. — The statement was made at Edmonton by Dr. O. B. Hopkins, chief geologist of Imperial Oil, Ltd., that a recent increase of 3½ cents a gallon in Alberta distillate prices was in no way due to prospective conservation measures. Investigation disclosed that distillate had been sold at a figure 3.06 cents below the actual production cost. The distillate was made from stocks not marketable as gasoline, the product being used largely for tractor fuel, while a large amount of Turner Valley naphtha was used for this purpose.

ASSOCIATED GETS CONTRACT

The Associated Oil Co. has just been awarded a contract to supply the Panama Canal with 1,000,000 gallons of gasoline, which is to be delivered by company steamer at Balboa and Cristobal, Canal Zone, this month.

OIL PLANT RAZED

CHATHAM, Ontario, Apr. 9. — The plant of the Price Oil Development Co. at Moose Jaw, Saskatchewan, was destroyed by fire recently, with loss on building and contents estimated at $50,000.

Must Lower Market Costs Says Head of Standard of Ohio

Present efforts to solve the problem of overproduction of crude oil and prospects of expanding demand for petroleum products over the years ahead give promise to the outlook for the oil industry, according to W. T. Holliday, president of the Standard Oil Co. of Ohio, in the complete annual report sent to stockholders.

The outstanding economic symptom in the oil industry of the past few years has been the steady narrowing of margins between the cost of crude oil and the prices for finished products, the statement declares. Oil companies, accordingly, are faced with the necessity of reducing their marketing cost if they are to realize profits on the margin now available.

"Gasoline sales of the Standard Oil Co. of Ohio and its subsidiaries in 1931 were the largest in the company's history, increasing 21.5 per cent over 1930," President Holliday's report says.

"Part of this increase arose from acquisition of additional properties but without this there was a gain of about 3 per cent over 1930 against an increased total gasoline consumption for Ohio of less than 1 per cent.

"Notwithstanding greater gallonage, the total of gross sales of the company, after deducting gasoline taxes, was $55,868,897, compared with $60,341,359 in 1930. This decrease was due entirely to lower price levels in 1930. Net profits of the company for 1931, after all charges before dividends, amounted to $2,359,173."

Three important steps taken by the company in 1931 included acquisition of a substantial financial interest in the Ajax Corp., which holds all of the stock of the Ajax Pipe Line Co.,; the acquisition of all the physical assets and business of the Refiners Oil Co., Dayton, and the purchase of all the assets of the Solar Refining Co., Lima, Ohio.

Excessive multiplication of gasoline stations in the industry has tended to create a high marketing cost per gallon, but new forms of competition are forcing narrower margins and the only sound course is to get the cost of distribution into line with the reduced margin, the report says.

TEXACO OPENS "SHOW"

NEW YORK, Apr. 11. — The Texas Company has opened to the public a new petroleum show in miniature at 29 Broadway, in downtown New York.

The exhibit pictures the operations of the oil industry from the fields to the finished product, showing miniature wells, pipe lines, refineries, etc., with miniature electric trains in operation hauling tank cars.

The Texas Company exhibit has been on display in the Grand Central Terminal district for a number of months, and the new downtown exhibit, like its uptown predecessor, is drawing large crowds daily.

ONTARIO FUEL OIL TAX

CHATHAM, Ontario, Apr. 9. — The Ontario fuel oil tax of one-half cent per imperial gallon on all fuel oil consumed within the province, and which was authorized at the recent session of the legislature, will not become operative till proclaimed by the government. It is understood the government will defer enforcement of the tax for some time. Potential revenue from the tax is estimated at $250,000 a year.

HENRY VAN DER WYK RETIRED

Henry Van Der Wyk, district manager of the Standard Oil Co. of New York for Rhode Island and southeastern Massachusetts, with headquarters in East Providence, R. I., has been retired on pension after 38 years of service. Edward W. Cowie, of the Worcester district, has been named as his successor.

REFINERS HOLD CRUDE RUNS TO DEMAND

(Continued from Page 15)

REFINERY OPERATIONS IN NORTH CENTRAL TEXAS

(Plants which have been in operation during the past year)

Company and location—	Daily capacity	Runs Apr. 1	Runs Mar. 1
All State Refining Co., Thrall	3,000	1,100	1,500
American Refining Properties, Wichita Falls	6,000	(*)	(*)
Apache Refining Co., Sunray	4,000	(*)	(*)
Archer Refining Co., Megargel	1,500	500	200
Atlantic, Pacific & Gulf Refining Co., Wichita Falls	5,000	(*)	(*)
Continental Oil Co., Wichita Falls	5,000	2,500	2,000
Dale Oil & Refining Co., Electra	4,000	(*)	(*)
Deer Oil Corp., Brownwood	2,000	(*)	(*)
Dixon Creek Oil & Refining Co., Kings Mill	3,500	(*)	1,000
Echotex Refining Co., Echo	3000	100	100
Empire Oil & Refining Co., Gainesville	5,000	3,300	3,000
Falls Refining Co., Wichita Falls	2,000	1,000	500
Gratex Refining Co., Graham	500	130	(*)
Gulf Refining Co., Fort Worth	10,000	6,000	2,600
Humble Oil & Refining Co., Breckenridge	2,000	(*)	(*)
Humble Oil & Refining Co., Chilton	4,000	500	400
Humble Oil & Refining Co., Boggy Creek	5,000	2,000	1,975
Iowa Park Producing & Refining Co., Iowa Park	2,500	800	(*)
Kent Refining Co., Minerva	2,000	350	(*)
Kent Refining Co., Angus	4,000	200	(*)
LaSalle Petroleum Co., Burkburnett (Noble)	3,500	(*)	(*)
Macmillan Petroleum Co., Isom	3,000	(*)	(*)
Magnolia Petroleum Co., Fort Worth, No. 1	12,000	4,200	4,200
Magnolia Petroleum Co., Fort Worth, No. 2	6,000	2,200	3,000
Magnolia Petroleum Co., Corsicana	5,000	4,500	4,200
Marathon Oil Co., Fort Worth	5,000	3,500	3,000
Muenster Refining Co., Muenster	300	(*)	(*)
Olney Oil & Refining Co., Olney	2,500	1,500	1,200
Oriental Oil Co., Dallas	5,000	1,500	1,500
Panhandle Refining Co., Wichita Falls	5,000	2,000	1,500
Petroleum Refractionating Co., Pampa	6,500	6,000	6,000
Phillips Petroleum Co., Isom	18,000	17,500	16,000
Primrose Refining Co., Wichita Falls	2,500	2,000	2,000
Sinclair Refining Co., Fort Worth	5,000	2,300	2,500
Simms Oil Co., West Dallas	4,500	3,000	3,000
Southland Refining Co., Olney	1,000	(*)	(*)
Seymour Refining Co., Seymour	250	(*)	(*)
Star Refining & Producing Co., Fort Worth	1,500	800	800
Superior Refining Co., Tiffin	2,000	(*)	(*)
Taylor Refining Co., Taylor	6,000	1,700	1,700
Taxman Refining Co., Wichita Falls	2,500	2,000	(*)
The Texas Company, Dalina	16,000	15,000	13,000
The Texas Company, Amarillo	4,000	2,000	2,700
Tidal Western Refining Co., Burkburnett	3,000	(*)	(*)
Texas Pacific Coal & Oil Co., Fort Worth	3,000	2,000	2,000
Texas Pacific Coal & Oil Co., Caddo	1,000	650	600
Waggoner Refining Co., Electra	3,400	3,000	1,200
Wilcox Oil & Gas Co., (Pampa Refining Co.), Pampa	4,000	(*)	2,500
Young Refining Co., Archer City	250	(*)	(*)
Total	204,000	95,700	85,075

*Shut down.

REFINERY OPERATIONS IN OKLAHOMA

(Plants which have been in operation during the past year)

Company and location—	Daily capacity	Runs Apr. 1	Runs Mar. 1
Altitude Petroleum Corp., Oklahoma City	3,000	1,000	1,000
Anderson-Prichard Oil Corp., Cyril	5,000	3,500	(*)
Barnsdall Refineries, Inc., Barnsdall	6,000	3,500	3,500
Barnsdall Refineries, Inc., Okmulgee	10,000	4,500	5,000
Bell Oil & Gas Co., Grandfield	4,500	1,800	1,800
Black Gold Refining Co., Oklahoma City	1,500	700	700
Capital City Refining Co., Oklahoma City	2,500	100	100
Century Petroleum Co., Tulsa	500	(*)	(*)
Century Petroleum Co., Oklahoma City	2,500	1,600	1,000
Champlin Refining Co., Enid	16,000	6,000	6,000
Continental Oil Co., Sapulpa	10,000	1,500	800
Continental Oil Co., Ponca City	30,000	10,070	8,700
Cushing Refining & Gasoline Co., Blackwell	1,800	1,500	1,500
Cushing Refining & Gasoline Co., Cushing	3,500	3,000	2,500
Deep Rock Oil Corp., Cushing	10,000	9,500	9,000
Eason Oil Co., Enid	5,000	2,500	2,000
Empire Oil & Refining Co., Okmulgee	4,000	3,300	3,000
Empire Oil & Refining Co., Ponca City	12,000	8,000	6,800
Garber Refineries, Inc., and Omar Refining Co., Garber	3,500	2,200	2,200
Globe Oil & Refining Co., Blackwell	7,500	4,500	4,500
Gulf States Oil Corp., Oklahoma City	3,500	1,500	1,700
Johnson Oil Refining Co., Cleveland	6,000	3,500	3,500
Major Oil Co., Oklahoma City	2,000	(*)	(*)
Mid-Continent Petroleum Corp., West Tulsa	40,000	19,000	19,000
Marathon Oil Co., Boynton	3,500	(*)	(*)
Marathon Oil Co., Bristow	5,000	(*)	3,000
Sterling Refining Co., Oklahoma City	2,000	1,500	(*)
Phillips Petroleum Co., Okmulgee	5,000	4,500	4,000
Producers Oil Co., Bristow	2,500	1,000	1,000
Producers & Refiners Corp., West Tulsa	6,000	3,500	3,000
Pure Oil Co., Ardmore	5,000	2,300	2,200
Pure Oil Co., Muskogee	9,000	8,000	7,500
Rock Island Refining Co., Beckett	5,000	4,000	4,000
Sinclair Refining Co. (Pierce), Sand Springs	8,000	2,300	2,300
Sun Oil Co., Yale	5,000	3,200	3,200
Sunray Oil Co. (C. H. Wright, receiver), Allen	7,000	2,500	3,000
The Texas Company, West Tulsa	15,000	7,000	6,800
Texas Pacific Coal & Oil Co., Wynnewood	3,000	(*)	(*)
Tidal Refining Co., Drumright	15,000	7,000	7,000
Western Oil Corp., Beckett	2,000	500	1,200
White Oak Corp., Allen	8,000	(*)	500
Wilcox Oil & Gas Co., Bristow	5,000	3,000	3,000
Wirt Franklin Petroleum Corp., Ardmore	4,000	3,350	3,300
Yale Oil Corp., Yale	2,000	400	400
York Refining Co., Oklahoma City	3,000	200	(*)
Total	309,300	147,020	139,700

*Shut down.

REFINERY OPERATIONS IN WEST TEXAS

(Plants which have been in operation during the past year)

Company and location—	Daily capacity	Runs Apr. 1	Runs Mar. 1
Bluebonnett Oil Refining Co., Wickett	5,000	(*)	1,200
Burford Oil Co., Pecos City	6,000	(*)	(*)
Coltex Refining Co., Colorado	10,000	5,400	5,800
Concho Refining Co., San Angelo	300	40	100
Cosden Oil Co., Big Spring	15,000	6,200	6,200
Deer Oil Corp., Luling	2,500	(*)	(*)
Ewmo Oil Corp., Luling	2,500	(*)	(*)
Grayburg Oil Co., San Antonio	6,000	1,700	650
Great West Refining Co., Big Spring	8,500	(*)	(*)
Gulf Refining Co., Sweetwater	5,000	4,000	3,000
Howard County Refining Co.	2,500	(*)	(*)
Humble Oil & Refining Co., San Antonio	5,000	1,000	715
Humble Oil & Refining Co., McCamey	15,000	(*)	(*)
Magnolia Petroleum Co., Luling	5,000	3,300	4,300
Marathon Oil Co., Del Rio	5,000	1,700	(*)
Misko Refineries, Inc., Laredo	1,500	350	350
Motor Fuel Products Co., Laredo	2,000	(*)	(*)
Paramount Refining Co., San Angelo	2,000	600	800
Pasotex Petroleum Co., El Paso	14,000	4,200	4,300
Pioneer Oil & Refining Co., Somerset	1,500	800	950
Richardson Refining Co., Big Spring	6,000	(*)	(*)
Rio Grande Oil Co., El Paso	6,000	1,000	700
Signal Gasoline Co., Texon	500	(*)	200
The Texas Company, San Antonio	3,000	2,500	2,500
The Texas Company, El Paso	2,000	500	1,100
Tonkawa Petroleum Co., Pyote	5,000	(*)	(*)
Texas Mexican Oil & Refining Co., Laredo	600	400	400
Texas Petroleum Products Co., Somerset	1,500	600	320
Wickett Refining Co., Wickett	2,500	60	525
Total	139,900	34,350	34,610

*Shut down.

REFINERY MARKET PRICES ADVANCE WITH CRUDE

(Continued from Page 12)

ums for the respective grades and as a matter of fact, less effort is made in selling these fuels at a premium than moving the low octane material.

Kerosene

Kerosene has featured the Oklahoma refined oil market for two weeks and is being tightly held. Stocks are relatively low and at the current rate of demand refiners are promised a continued advance in prices. This is accounted for by the gradually decreasing production as this fraction is utilized as charging stock for cracking operations to make motor fuels of high antiknock value. The key to the kerosene market over the future seems to lie in the extent to which refiners increase crude runs. The 41-42 gravity material is selling firm at 3½ to 3¾ cents. Several refiners are also in the spot market to take any good quality material priced below this range.

Natural Gasoline

The natural gasoline market has not moved forward with refinery gasoline prices. A variety of opinions exist as to the cause. There is no question but that the demand from refiners has shrunk to a very low figure but over the past months manufacturers have pointed to the growing outlet for their product direct to the jobbers and consumers as superstabilized motor fuel. Failure of the natural market to move up with motor gasoline is ascribed to warmer weather, which causes jobbers to fear vapor-locking. Other manufacturers say there is not a unified effort among their group to try to boost prices. To just what extent this is operative is questionable but the statement is made that because high prices cannot be established for natural gasoline, some of the manufacturers who have outlets for their product as motor fuel by blending with refinery gasoline are not making an extra effort to raise prices as has been done in the past when conditions such as exist today presented themselves. The 26-70 grade moved to 2¼ cents as the minimum price, which is one-eighth cent above the range of a week ago. It is expected that trading over the immediate future will continue within this range if the market is allowed to drift in its own course.

Fuel Oil and Gas Oil

Fuel oil and gas oil naturally strengthened as the result of the crude price advance, but there were no price changes in addition to those made a week ago. Fuel oil going to the railroads on contract takes a higher price and this has benefited refiners. Refiners do not claim a shortage of fuel oil and as warmer weather approaches there will be less stress on cold test, so the future of the whole fuel market seems to hinge on the course refiners will take in raising crude runs. While the quantity of U.G.I. gas oil to be had at 1¼ cents was less than a week ago, there was a sufficient volume to place this figure as the bottom of the price range.

Lubricants and Wax

All grades of bright stock advanced 2 cents during the past week and this brings the price of the 156 viscosity D colored 0-10 cold test material to a minimum price of 19¾ cents. Neutrals were not advanced, but the demand was stimulated by the advance in price posted in other commodities and the neutral market is in a favorable shape to move forward with any seasonal increase in actual consumption. Refiners were also prompted to quote with great care on wax inquiries and the high of the price range was placed at 2 cents with the low unchanged at 1¾ cents for the 124-126 M.P. grade.

TEXAS OUSTER PETITION IS HELD INSUFFICIENT

(Continued from Page 24)

ferences alleged; who were the agents representing the other alleged parties to such meetings and conferences; when and where the meetings and conferences were held and what the completed agreements consisted of.

Posting of Prices

The original petition charged that an article of the code of ethics relating to posting of prices was intended to bring about posting of the same prices by all defendants. In regard to these allegations the exception sustained, together with certain language used by the court in announcing its decision, appeared to require the attorney general to name the towns in which the alleged transactions occurred, as well as the time of such occurrences and the agents concerned in them.

Several score special exceptions offered by the defendants were upheld, thus requiring a complete repleading of the State's case.

At the same time a group of exceptions, including those in which the question of constitutionality of the antitrust law was raised, was overruled. Exceptions in the nature of a general demurrer to the cause of action and to various portions of the State's petition were overruled, while exceptions as to manner and form of pleading were sustained.

Of the exceptions overruled, the most important were those attacking the constitutionality of the antitrust law. In arguing them, defense counsel stressed an exemption for farmers and stockmen, appearing in the criminal antitrust laws and the marketing associations act, passed in 1921 and amplified in 1930. Because of these, it was contended, the legislature had authorized certain classes of citizens and certain organizations to do things which others, including the oil companies, were prohibited from doing by the antitrust laws, and thus the latter had been rendered discriminatory and therefore unconstitutional.

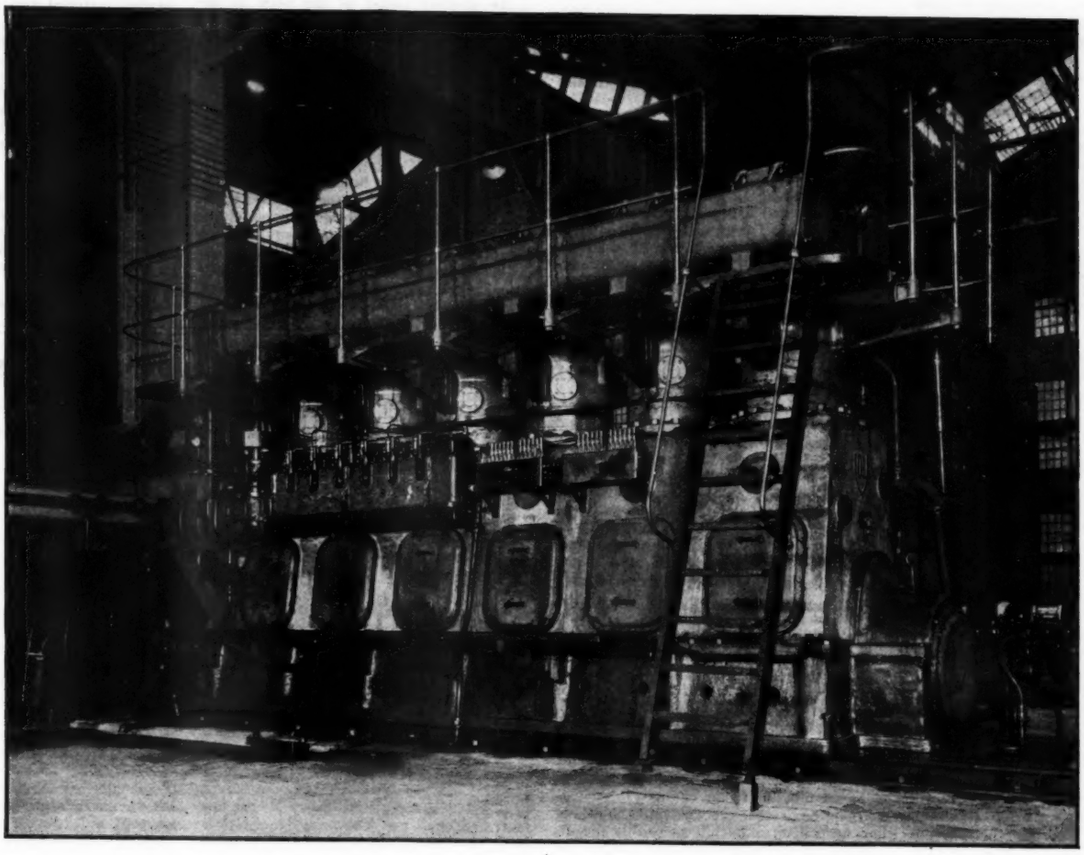
Antitrust Law

The attorney general insisted that the farmers' and stockmen's exemption in the criminal antitrust statutes was there by mistake of the codifiers and had no real standing as law; that the original marketing associations act was valid as representing a reasonable classification but, if the court decided it was discriminatory, then it should be declared unconstitutional and the antitrust statutes preserved. As to amendments to the marketing associations act, adopted in 1930, Mr. Allred said they were clearly unconstitutional and indefensible.

TANK WAGON CHANGES

(Continued from Page 62)

The Magnolia Petroleum Co., April 11, advanced tank wagon and service station prices as follows: Muskogee, Okla., 3 cents to 14 and 16 cents; Texarkana, Ark., 2 cents to 18 cents each; Oklahoma City and Tulsa, 1 cent to 14 and 16 cents; Fort Smith, Ark., one-half cent to 17.5 cents each; Little Rock, Ark., one-half cent to 18.5 cents each. In Texarkana, Fort Smith and Little Rock the prices are 2½ cents less to dealers.



One of the eight 750 b. hp. 6-cylinder Model VA De La-Vergne Diesels recently purchased by one of the large oil pipe line companies. The engine is being tested in the shop prior to shipment.

6000 RELIABLE HORSEPOWER
FOR A MAJOR OIL PIPE LINE COMPANY

THE record maintained by De La Vergne Diesels for the past quarter century as truly reliable, economical prime movers for pipe line pumping service warranted the recent purchase of eight 750 b.hp. Model VA De La Vergne Diesels by one of the large oil pipe line companies. These will be used for trunk line service in the Middle West.

The continued increase in the number of De La Vergne Diesel Engines in this field where dependable, steadfast operation is absolutely essential and forced shut-downs prohibited, is obvious evidence of this company's leadership. Leadership founded and maintained on sturdy, substantial engine construction and design.

Without incurring any obligation, our engineers will be pleased to discuss with you the reasons that have created such a definite preference for De La Vergne 4-cycle, solid-injection Diesels.

DE LA VERGNE ENGINE CO.
SALES AGENT FOR BALDWIN-SOUTHWARK CORP.
DIESEL DIVISION
PHILADELPHIA, PA.

MORE ATTENTION TO BE PAID TO MARKETING

(Continued from Page 13)

of the third grade gasoline development, said:

"The lower cost of low-compression gasoline, the refinery necessity of making it, the continued operation of low-compression motors and the depressed buying tendency of the public all point to the business advisability of marketing third-grade gasoline to serve the low price buyer now and for some time to come, in this Mid-Continent area which is the subject of my study.

"Refining distributors should individually and collectively resist stepping up the octane quality and cost of third-grade gasoline and keep it in the low-cost and low-priced field.

"Statistics should be made and consulted regularly showing the approximate current supply of low-compression gasoline along with high-compression gasoline.

"Local demand in all communities should be studied and compared carefully and an intelligent price and discount structure maintained in relation to the higher-compression gasoline. Changes in volume relationship, beyond reason, supply considered, might be controlled by price relationship.

"The decision as to need and use of a third-grade gasoline by all responsible companies in a community is more important than the color of the third-grade product. Wherever the low-priced market has been found or established by a marketer others should undertake to serve it with third-grade low-cost gasoline.

"The general and fundamental sales story should be that each grade of gasoline is worth the price to the consuming public not definitely determined nor permanently fixed; that the large majority of buyers will find the better values in Ethyl and regular grades, but if a customer feels sure his best interest is in the purchase of third-grade gasoline he will be served.

"The attempt of any sizeable company to cover the low-priced low-compression field with high-compression gasoline cannot be other than costly to the industry but more so to that company.

"Calculation of individual benefits by reason of handling a third-grade gasoline should begin with the value of the maintained structure of high-compression gasoline.

"And finally may I say that temporary ability of a refiner to produce a special product such as high-compression gasoline at a cost equal to low-compression should not dictate the extent of his co-operation or lack of co-operation with the rest of the industry in their effort to establish reasonable specifications on gasoline and conservative progress of change therein. Temporary advantage improperly used is usually more than nullified later."

Explains Diesel Motor

S. A. Guiberson, Sr., of Dallas, Tex., who has been prominent in the oil equipment field for several years, flew to the convention in a Diesel-powered airplane and explained the operation of the Diesel motor which he developed for various power uses. Refiners were particularly interested in the fuel requirements of the Diesel engine for airplanes. Mr. Guiberson explained:

"As to the most efficient fuel for this engine, we have naturally done considerable experimenting. We have been offered and advised to use everything from 24-degree heavy Diesel fuel to 43 and 44-degree furnace oil. Illustrative of the comparative results obtained in test, I cite one experiment herewith: A battery of five accurately gauged tanks was set up in-banc, all connected by manifold to the fuel feed line of the engine on the block. Into these tanks were placed five grades of Diesel fuel of varying gravity, all made by the same manufacturer. The engine was then run on its regular fuel supply until thoroughly warm. Thereupon, it was switched onto fuel from tank No. 1. For 20 minutes exactly it ran on this fuel, then, 20 minutes on each of the other fuels so that a fair comparison was had. During the tests the throttle was not changed. All fuels had exactly the same temperature and other conditions were the same. Results were measured by the amount of fuel consumed and by the speed given to the propeller and are shown as follows:

Tank No.	Gravity of fuel	Consumption of fuel (qts.)	RPM of propeller
1	43°	12,875	1,925
2	40°	12,500	1,940
3	36°	12,125	1,925
4	32°	11,875	1,965
5	28°	11,323	1,975

"These comparative tests show decidedly that the lower the gravity of the fuel the smaller is the consumption and the greater is the horsepower delivered. For the present, on account of the availability, we are using and recommending a 34-36-degree Diesel oil or a furnace oil of these gravities, but further testing will have to be done before final efficiency determination is made."

NEW SPECIFICATIONS FOR GASOLINE ARE APPROVED

(Continued from Page 16)

maximum limit be increased from 140° F. to 155° F. in the winter grade and from 155° F. to 165° F. in the summer grade. Another refiner said his company's experience had shown that 10 per cent off at 135 resulted in vapor lock. These objections were answered with the statement that the 140° F. and 155° F. specifications had been found satisfactory. The fact that fuel lines in motor cars have been redesigned so that they are not exposed to the heat of engine operation as much as formerly, was also explained in the vapor lock discussion.

Widen Lub Market

The discussion in regard to new gasoline specifications was followed with a paper by L. C. Eldridge of the Shell Petroleum Corp. on lubricating oils. In the paper, Mr. Eldridge stressed the desirability of western refiners keeping pace with the developments, covering specifications for oils due to the changes in chassis and engine design. It was said that there had been discrimination as to oils recommended by car manufacturers due to the fact that the western refiners had not been given the opportunity to adapt their oils to the new requirements.

Central Laboratory

To make a check on the specifications of gasoline, it will be necessary if the new grades are generally adopted to provide a central laboratory where samples can be tested. Following the presentation of a paper on "Co-operative Research in the Petroleum Industry," by Dr. Sidney Born, professor of petroleum research at the University of Tulsa, it was suggested that the facilities of the university might be used for the laboratory testing and also in connection with the more aggressive policy that refiners propose to take in the matter of enlarging the markets for western lubricating oils. Doctor Born, who was connected with research and development departments of Mid-Continent refineries, before accepting his present position stated that the petroleum school of the university had adequate equipment to carry on the necessary work.

As another phase of the plan to assume closer co-operation between the automotive industry and Mid-Continent refiners, E. O. Eckert of Tulsa spoke in favor of the formation of a Mid-Continent branch of the Society of Automotive Engineers. Similar organizations in the East enable refiners to keep pace with the changing automotive requirements with advantages to both industries.

Mail Order Specifications

In connection with the discussion on specifications for petroleum products a report was read giving the requirements established by a large mail order house which is entering the gasoline business on a large scale through large one-stop stations. The specifications were cited as an example of the absurd requirements that have been set up by buyers not familiar with consumer requirements. The mail order specifications are as follows:

Specifications for cross country anti-knock gasoline summer grade:

"1. The gasoline must be free of suspended material and any trace of water.

"2. The gasoline must not contain more than .10 per cent of sulphur in any form.

"3. The gasoline must not contain more than 3 milligrams of dissolved gum per 100 cc. when taken in a porcelain or glass dish nor more than 15 milligrams of gum per 100 cc. when taken in a copper dish.

"4. The gasoline must not contain more than 15 milligrams per 100 cc. of potential gum nor have any greater loss of pressure than 2 pounds within four hours when subjected to the accelerated gum test developed by the Ethyl Gasoline Corp.

"5. The gasoline should give a nega-

CALIFORNIA CRUDE OIL PRICES

STANDARD OIL CO. OF CALIFORNIA

For its current purchases of crude oil at the well (unless otherwise specified) for allowable crude oil produced in accordance with allocations made by the California Statewide Curtailment Committee. All gravities above those quoted take highest price offered in that field. Effective June 19, 1931 at 7 a.m.

Gravity	Signal Hill	Seal Beach, Alamitos Heights	Huntington Beach	Inglewood	Olinda-Brea, Canon	Torrance	Richfield	Coyote Hills	Santa Fe Springs	Midway-Sunset, Elk Hills, Buena Vista Hills	Lost Hills
14-14.9	$.65	$.65	$.65	$.65	$.65	$.65	$.65	$.65	...	$.55	$.55
15-15.9	.65	.65	.65	.65	.65	.65	.65	.65	...	.55	.55
16-16.9	.65	.65	.65	.65	.65	.65	.65	.65	...	.55	.55
17-17.9	.65	.65	.65	.65	.65	.65	.65	.65	...	.55	.55
18-18.9	.65	.65	.65	.65	.65	.65	.65	.65	...	.55	.55
19-19.9	.65	.65	.65	.65	.65	.65	.65	.65	...	.55	.55
20-20.9	.65	.65	.65	.66	.66	.65	.65	.65	...	.55	.55
21-21.9	.65	.66	.65	.68	.67	.65	.66	.65	...	.55	.57
22-22.9	.65	.65	.66	.70	.68	.66	.68	.65	...	.56	.59
23-23.9	.67	.67	.68	.72	.70	.67	.70	.66	...	.58	.60
24-24.9	.69	.69	.70	.74	.72	.68	.72	.67	$.65	.61	.62
25-25.9	.71	.71	.72	.76	.74	.70	.74	.69	.65	.64	.64
26-26.9	.73	.73	.74	...	.76	...	...	.71	.65	.66	.65
27-27.9	.75	.75	.76	...	.78	...	...	.73	.68	.68	.67
28-28.9	.77	...	...	...	.80	...	...	.75	.71	.71	.69
29-29.9	.79	...	...	...	...	...	...	.77	.73	.74	.71
30-30.9	.81	...	...	...	...	...	...	.79	.75	.76	.72
31-31.9	...	...	...	...	...	...	...	...	.78	...	...
32-32.9	...	...	...	...	...	...	...	...	.80	...	...
33-33.9	...	...	...	...	...	...	...	...	.83	...	...
34-34.9	...	...	...	...	...	...	...	...	.85	...	...
35-35.9	...	...	...	...	...	...	...	...	.87	...	...

Standard Oil Co. of California prices in other fields:

Wheeler Ridge—55 cents per barrel for all grades (14° to 25.9°).

Coalinga—55 cents for all grades from 14° to 24.9°; 57 cents for 25 gravity.

Newhall, McKittrick and Kern River—55 cents for all grades (14° to 19.9°).

Montebello—65 cents for all grades (14° to 25.9°).

Whittier and LaHabra—65 cents for all grades (14° to 22.9°).

Elwood Terrace, f.o.b. ship—32° to 33.9°, 79 cents; 34° to 34.9°, 81 cents; 35° to 35.9°, 84 cents; 36° and above, 87 cents.

Playa Del Rey—Prices subject to field gathering charge of 5 cents per barrel—19° to 19.9°, 65 cents; 20° to 20.9°, 65 cents; 21° to 21.9°, 66 cents; 22° to 22.9°, 67 cents; 23° to 23.9°, 68 cents; 24° to 24.9°, 67 cents; 25° and above, 68 cents.

ASSOCIATED OIL CO. PRICES

Associated Oil Co. prices effective June 20 are as follows:

Ventura Avenue—32 gravity, 58 cents, with 2 cents added for each degree upward to and including 30 gravity, which is 74 cents.

Kettleman Hills—The Associated Oil Co., effective at 7 a.m. February 5, 1932, withdrew and canceled any and all prices heretofore published and in effect for Kettleman Hills oil.

Potrero—24 gravity, 69 cents, with 2 cents added for each degree upward to 34 gravity which is 69 cents.

General Petroleum Co. in Kettleman Hills, effective January 1, 1932: 33-33.9°, 66 cents; 34-34.9°, 68 cents; 35-35.9°, 70 cents; 36-36.9°, 72 cents; 37-37.9°, 74 cents; 38-38.9° 76 cents; 39-39.9°, 78 cents.

UNION OIL CO. OF CALIFORNIA

Crude Oil Prices for Its Purchases at the Well for Crude Produced in Strict Accordance With the Production Allocation Made by the California Statewide Curtailment Committee Effective 7 a.m., June 20, 1931

(All gravities above those quoted take highest price for that field)

Gravity° A.P.I.	Signal Hill	Alamitos Heights, Seal Beach	Huntington Beach, Athens, Rosecrans,	Dominguez	Torrance	Santa Fe Springs	Playa Del Rey* E. Coyote	Richfield	Montebello	Santa Paula	Orcutt	Coalinga	Lost Hills	McKittrick, Kern River, Sunset-Midway, Elk Hills, Buena Vista Hills	Gravity° A.P.I.
11-13.9	....	....	....	....	....	....	....	....	....	....	....	....	....	$.50	11-13.9
14-14.9	$.65	$.65	$.65	....	$.65	....	....	$.65	$.65	$.65	$.55	$.55	$.55	.55	14-14.9
15-15.9	.65	.65	.65	....	.65	....	....	.65	.65	.65	.55	.55	.55	.55	15-15.9
16-16.9	.65	.65	.65	....	.65	....	....	.65	.65	.65	.55	.55	.55	.55	16-16.9
17-17.9	.65	.65	.65	....	.65	....	....	.65	.65	.65	.55	.55	.55	.55	17-17.9
18-18.9	.65	.65	.65	....	.65	....	....	.65	.65	.65	.55	.55	.55	.55	18-18.9
19-19.9	.65	.65	.65	....	.65	....	$.65	.65	.65	.65	.55	.55	.55	.55	19-19.9
20-20.9	.65	.65	.65	....	.65	....	.65	.65	.65	.65	.56	.55	.55	.55	20-20.9
21-21.9	.65	.65	.65	....	.65	....	.66	.66	.65	.65	.57	.55	.57	.55	21-21.9
22-22.9	.65	.65	.65	....	.66	....	.67	.67	.65	.65	.59	.55	.59	.56	22-22.9
23-23.9	.67	.67	.67	....	.67	....	.68	.68	.65	.65	.61	.55	.60	.58	23-23.9
24-24.9	.69	.69	.69	$.69	.68	$.65	.69	.69	.65	.66	.63	.55	.62	.61	24-24.9
25-25.9	.71	.71	.71	.71	.70	.65	.70	.70	.65	.68	.65	.57	.64	.64	25-25.9
26-26.9	.73	.73	.73	.73	....	.65	....	.72	....	.70	.67	....	.66	.66	26-26.9
27-27.9	.75	.75	.75	.76	....	.68	....	.74	....	.72	....	....	.67	.68	27-27.9
28-28.9	.77	....	....	.77	....	.71	....	....	....	.74	....	....	.69	.71	28-28.9
29-29.9	.79	....	....	.79	....	.73	....	....	....	.76	....	....	.71	.74	29-29.9
30-30.9	.81	....	....	.81	....	.75	....	....	....	.78	....	....	.72	.76	30-30.9
31-31.9	....	....	....	.83	....	.78	....	....	....	....	....	....	....	....	31-31.9
32-32.9	....	....	....	.85	....	.80	....	....	....	....	....	....	....	....	32-32.9
33-33.9	....	....	....	.87	....	.83	....	....	....	....	....	....	....	....	33-33.9
34-34.9	....	....	....	.89	....	.85	....	....	....	....	....	....	....	....	34-34.9

*Subject to a gathering charge of 5 cents per barrel.

tive reaction to the sodium plumbite test.

"6. The gasoline should not lose its color when exposed in a sealed bottle to either artificial or actual sunlight for a period of 10 days.

"7. The distillation range shall consist of a smooth gently rising chain of boiling points whose salient points shall be as follows:

I.B.P. not less than 95° F.
10% shall fall between 130-160° F.
50% shall fall between 260-280° F.
90% shall fall between 370-390° F.
Endpoint ..... 400-425° F.
Recovery shall not be less than 96.5.
Residue shall not be more than 1.5%.
Distillation loss shall not be more than 2%.

"The residue of the gasoline must be absolutely neutral nor shall this residue be of coke-like nature to the minutest degree.

"8. The vapor pressure of the gasoline shall be absolutely neutral nor shall this residue be of coke-like nature to the minutest degree.

"9. The gasoline shall have an octane rating of not less than 70. The octane rating must be determined by a method approved by the U. S. Bureau of Standards on either a genuine Ricardo engine, an Ethyl Gasoline Corp. engine or a Horning engine.

"10. The gasoline must not show a loss of knock rating when subjected to 30 days air-tight storage.

"11. The gasoline must be free from unpleasant odors when judged by a refinery man.

"12. No importance is attached to the gravity of the gasoline.

Octane Rating

In the matter of octane rating of gasoline one speaker explained some recent tests point to far reaching results in regard to the relative rating of motor fuels. It has been found that present testing equipment does not adequately reflect the varying antiknock performance of motor fuels based on actual performance in service tests. The investigation of this important development is not complete and the data given at the meeting was in the nature of a progress report and is not available for publication at this time.

Some valuable data based on laboratory work covering results obtained in cracking operations was also presented. This work will not be published until complete data are obtained. Other technical papers were presented by W. A. Goldtrap, Arthur G. McKee & Co.; H. M. Smith, Bureau of Mines; Emby Kaye, Skelly Oil Co.; B. E. Sibley, Skelly Oil Co., and Dr. Gustav Egloff, Universal Oil Products Co.

EAST TEXAS EQUIPMENT REQUIREMENTS DISCUSSED

(Continued from Page 16)

tor nearby and the customary hookup was made favoring large potential gauging. Each well actually gauged more than 500 bbls. per hour when tested. Well No. 1 had a tubing pressure of 180 pounds per square inch on one-quarter-inch choke, and well No. 2 had a tubing pressure of 250 pounds per square inch on one-quarter-inch choke. Together these two wells produced at the following rates:

	Bbls. per day
Month of May, 1931	1,369
June 1 to 15	725
June 16 to 30	635
July 1 to 15	500
July 16 to 31	404
August 1 to 17	340

The wells were shut in on August 17 at which time the tubing pressure had decreased from 180 pounds per square inch to 95 pounds per square inch on well No. 1, and from 250 to 160 pounds per square inch on well No. 2.

The wells were opened again on September 5 and allowed 225 bbls. each per day. The tubing pressure on No. 1 well had increased 95 pounds to 190 pounds per square inch and on No. 2 well had increased 75 pounds to 235 pounds per square inch.

On September 21 the allowable was cut to 185 bbls. per day on each well.

A bottom hole pressure of 1,159 pounds per square inch was recorded on No. 1 well on September 24. Pumping rigs had been installed on other wells to the east and on September 27 concrete foundations for conventional pumping equipment were installed on each well because it appeared at that time the wells would need to be pumped soon.

The allowable production was reduced to 175 bbls. on October 13, 1931; then to 150 bbls. on October 29, and further to 125 bbls. on November 7.

By November 11 the bottom hole pressure had increased 40 pounds on well No. 1 to 1,199 pounds per square inch.

On December 11 the allowable was cut to 100 bbls. and during this month some operators began to shut in their wells on Sunday. By this time it was apparent that these wells would continue to flow, so no further work was done towards installing pumping machinery. The large flow lines were reduced and one separator was used to serve three wells.

On February 4 the bottom hole pressure was found to be 1,233 pounds per square inch, an increase of 34 pounds, since November 11 when last measured. The allowable was reduced to 75 bbls. on February 5, and further to 72 bbls. on March 16.

Well No. 1 now has a tubing pressure of 205 pounds per square inch; No. 2 now has a tubing pressure of 250 pounds per square inch; No. 3 now has a tubing pressure of 230 pounds per square inch; No. 4 now has a tubing pressure of 230 pounds per square inch.

Last August everything indicated that this lease would need pumping equipment soon. None has been installed and these wells will now probably continue to flow for some time.

Rate of Withdrawal

Low rates of production tend to a more effective use of the formation gas in pumping wells just as they do in flowing wells. Is there any sound reason for disregarding reservoir pressures, gas-oil ratios, and similar factors when a pool or field reaches the pumping stage? When operators are regulated so that definite quantities of oil can be recovered from flowing wells, should we expect to produce more than these quantities from pumping wells? The same principle should apply regardless of the method used to recover or lift the oil, if the natural forces in the formation are to be utilized to the best advantage. Reliable data should be sought during the flowing life of the East Texas reservoir in order to assist in the proper selection of pumping equipment, if and when pumping becomes necessary.

A rate of withdrawal which permits of proper gas-oil ratios under pumping conditions would seem desirable if the gas is to be conserved and the reservoir energy utilized efficiently. We can expect sufficient gas under such operation to permit the use of the conventional oil field gas engine equipment.

If we assume that the physical condition in the East Texas Pool will continue relatively the same when the reservoir pressure in certain sections becomes so low that wells will no longer maintain their natural flow there is every reason to support a pumping program which will permit uniform withdrawals at rates which result in economical gas-oil ratios. Such views are receiving support on all sides. There is a growing conviction that legislation will undertake to compel the enforcement of such measures.

A.P.I. Resolutions

Last November 12 at Chicago the board of directors of the American Petroleum Institute adopted the following resolution:

"Whereas, the prevailing practices in the development of oil and gas pools and the production therefrom based upon the capture by each owner in the pool of as much as he can, as fast as he can, regardless of injury to his neighbors, have been proven to be wasteful of these irreplaceable natural resources, inequitable as between the owners of the common reservoir and demoralizing to the whole petroleum industry;

"Now, therefore, be it resolved, by the board of directors of the American Petroleum Institute, that it endorses, and believes the petroleum industry likewise endorses, the principle that each owner of the surface is entitled only to his equitable and ratable share of the recoverable oil and gas and reservoir energy in the common pool in the proportion which the recoverable reserves underlying his land bear to the recoverable reserves in the pool;

"Be it further resolved, in view of the necessity for immediate action to correct the deplorable conditions prevailing, that a committee of this board be appointed to prepare and recommend to the board within 60 days a comprehensive program designed to put into practical operation the principle herein enunciated."

The above committee recently reported to the board in part, as follows:

"The committee is working on a constructive program predicated on the already generally accepted principle of ratable production, which would co-ordinate with and reinforce well recognized conservation principles and practices now generally accepted by the industry at large."

In February the Railroad Commission of Texas issued a special order containing the following:

"From the testimony at the hearing, it appears clearly evident: (a) That withdrawal of oil in the past has been too rapid; (b) that the reservoir energy of the East Texas Field has been dissipated at an excessive rate due to excessive and disproportionate withdrawals of oil from the field; (c) that reservoir pressures have not been maintained as effectively as they should be in order to prevent liberation of 'free gas' and consequent high oil-gas ratios and resulting gas waste."

Ratable Production

Underlying "ratable production" are principles both sound in theory and ethical in practice. Support for such principles of operation is increasing tremendously both within and outside the industry.

It seems therefore that in any analysis of East Texas pumping requirements very serious consideration should be given to the probable adoption of such operating policies by the industry.

If such principles are accepted the application of pumping equipment to a well may be regarded as an artificial means by which we can permit the natural forces in the reservoir to continue their action in an efficient, normal and undisturbed manner and not as a method by which we might temporarily and wastefully rejuvenate a local area at the expense of neighboring properties. Pumping equipment can be selected with either thought in mind.

Three types of wells appear to be developing in the East Texas Field:

1. Along the west side are almost 50 wells which are producing some water.
2. The east side of the field has developed approximately 170 pumping wells.
3. Throughout what we will term the heart or center of the field, we find neither of the above conditions.

By "west side" is meant that part of the field where there is evidence of a water drive. Water has appeared in wells following in general a line representing the 3,300-foot contour. There is some evidence of a porous sand condition in wells making water which is permitting the water drive to maintain bottom hole pressures even when wells make as much as 80 per cent water. Such wells flow naturally when making as high as 60 per cent water and are very light pumpers under present conditions. The fluid stands high and the pumping lift is low. Enough gas is present to assist materially in pumping. Any conventional type of pumping equipment which has been used in other fields might be installed here. Selections may be made from a wide variety of types which need not be discussed here since all successfully accomplish the same purpose.

One Water Well

The following is the history of one East Texas water well: This well was completed and tested dry at a depth of 3,708 feet. It was drilled deeper and completed at 3,718 feet (-3,329 feet) during military shut down, August 23. It gauged 219 bbls. oil in three hours.

On September 5 the casing pressure was 260 pounds per square inch, and the tubing pressure 160 pounds per square inch on one-half inch choke through 2½-inch tubing. Water developed on the second day while the well produced its 225-bbl. allowable.

On September 24 the well went dead. It was swabbed back and a bottom hole choke was installed. The well continued to flow with few interruptions until November 29 when tubing was pulled and the well placed on the pump.

Since December 1 it has made its allowable in approximately 12 to 15 hours pumping.

The 2¼-inch working barrel is set at 2,500 feet, the pumping stroke is 54 inches long, and the rig runs 24 strokes per minute. A standard 30 horsepower electric motor operates the well which has a metered demand of 9 kilowatts. Consumption per month is approximately 2,500 kilowatt hours, and the total fluid handled is about 30 bbls. per hour; 80 per cent of which is water.

Many improvements or refinements are noticeable in the types of rigs which will probably be used along this area. Attention is being given to beam design which permits of convenient and reliable lubrication at the pitman bearings, saddle bearings, and rod hanger. Essentially straight lift motion is secured for the polish rod on long stroke rigs in various practical ways. Noise is being eliminated, friction reduced and appearances improved.

The increased use of alloy steels and more precise workmanship is noticeable. Counterbalances are almost universally a part of the equipment offered.

We expect to see the adoption of steel equipment for tubing boards and rod boards on pumping wells.

Wells in this area will probably head when rods and tubing are being pulled and some kind of oil saver should be used on each operation to decrease the fire hazard.

Pumping Areas

The east side of the field has already developed pumping areas. Here the sand is usually thin and tight. Consequently some of the wells have had a relatively short flowing life. There have been as many as 170 such wells reported at times. The western edge of these pumping areas appears to be receding east under the present withdrawal. Wells are reported to be flowing their 75-bbl. allowable in March, 1932, which produced only on the pump when they were completed six months ago.

Engineers estimate that wells in this area will cease flowing naturally when the net or available useful bottom hole pressure falls as low as 800 pounds per square inch.

There are indications of paraffin in pumping wells and due to tight sand conditions and the probable absence of water, we may expect wells in this area to be capable of producing only small amounts of oil even when tubing is installed near the bottom of the well, and the fluid head in the well is removed by pumping. Lighter types of pumping equipment or central powers may be practical for pumping along the east side of the pool.

A large part of the central section of the East Texas Field is underlaid by a relatively thick and porous sand. It is generally conceded that it will be some time, under anything approximating present withdrawals, before much pumping will be necessary in this section. We can therefore leave a discussion of the probable requirements for this portion of the field to our future meetings.

The information we have from wells that are now pumping indicates that small engines or motors will probably be sufficient to lift the allowable production. The gas being in solution, even in wells that are pumping large amounts of water, will assist in lifting the fluid.

Many operators have on hand small engines and motors which they will want to use. At some time during the life of the field, pumping conditions may necessitate large prime movers. With this in view

each operator should have in mind a foundation block to accommodate any change in size. This will save time and expense if it becomes necessary to make such a change.

It is possible that a common or plain working barrel and cups will pump East Texas wells successfully. The absence of sand to date in pumping wells indicates this.

Substantial bandwheel powers and jacks may take care of most of the pumping wells on the east side of the structure. Individual jacks, or units with a small electric motor, or gas engine, are receiving consideration.

Many companies have on hand electric motors which they could use. Pumping equipment driven by electric power is very satisfactory for operating leases. The electric power rate structure in East Texas will have an important bearing on the use of electric power for pumping.

More Recent Methods

It may develop that some of the more recent methods of pumping will prove adaptable to East Texas conditions.

One device called "the plunger lift" uses a string of tubing which has been reamed to remove all burrs and roughness and has a valve at the bottom. A plunger, approximately 12 inches long, fits this tubing loosely and travels the entire length of the tubing, discharging the fluid at the surface. The plunger then drops back to bottom for another load. Formation gas, or externally applied gas or air pressure, is the lifting medium which drives the plunger.

Another device offered uses one working barrel located approximately half way down the well, and a second working barrel placed at the bottom of the tubing. A packer just below the first barrel seats against the casing. An outlet is provided below the upper working barrel which allows the lower barrel on the up stroke to discharge fluid into the casing above the packer. On the down stroke the upper working barrel discharges the fluid at the surface.

In the absence of bull wheels on standard rigs, several friction clutch portable hoists are available which can be anchored to the derrick floor and driven by a chain from a sprocket on the bandwheel shaft. Such equipment may be moved around to service adjoining wells. The use of these hoists would eliminate a reversible clutch on the gas engine. Where road conditions and lease locations permit, winches mounted on trucks or trailers and driven through a power takeoff from the truck motor can be used. Small hoists are offered with individual motors mounted on skids or on special trailers. Different parts of the field will require different types.

EAST TEXAS PRODUCTION MEN TO MEET AT TYLER

The southwestern district of the American Petroleum Institute Division of Production will meet April 14 in the Blackstone Hotel, Tyler, Texas, to discuss problems common to the East Texas oil field. Officers for the ensuing year will be elected.

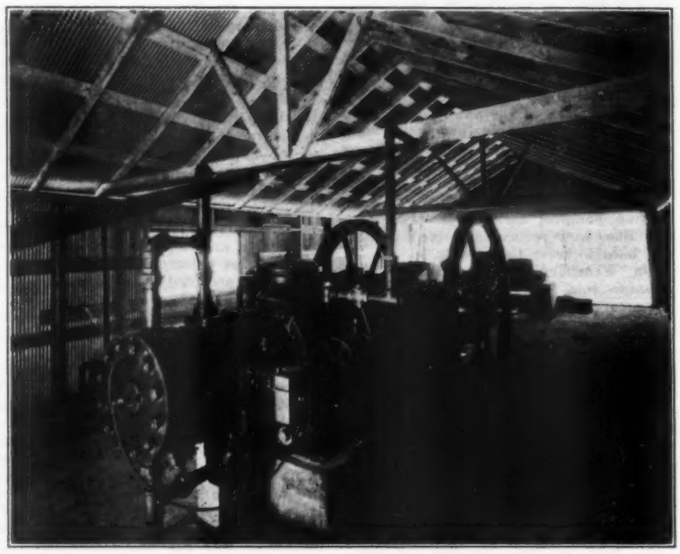
E. T. Doherty, Humble Oil & Refining Co., Houston, Tex., will present a paper on "Paraffin Troubles and Their Prevention." H. M. Staggs, Atlantic Oil Producing Co., Dallas, M. Albertson, Shell Petroleum Corp., Dallas, and R. B. Kelly, Pure Oil Co., Fort Worth, have a joint paper on "Tapered Tubing Practice." John A. Ritter and Blaine Johnston, Sun Oil Co. and Simms Oil Co., Dallas, respectively, have a paper on "Analysis of Pumping Equipment When Required in East Texas."

Capt. E. H. Eddleman, executive vice president, Texas Oil and Gas Conservation Association, Fort Worth, will present a paper on "Conserving Our Oil Resources in Texas." It is followed by a paper by E. V. Foran, consulting engineer, Fort Worth, Tex., on "The Interpretation of Bottom Hole Pressure Data in the East Texas Field."

BETTER TIMES AHEAD IN THE OIL INDUSTRY

(Continued from Page 17)

been shown by past experience that it is very difficult to anticipate when a particular well or lease will have to go on the beam. For this reason many wells are now reported as dead simply because



40 H.P. Superior Oil Engine with countershaft furnishing power for a pumping well on Sakoba Oil Co., Inc.'s property in Gladewater area, East Texas Field.

pumping equipment was not installed and while it is being put into place no production is being secured, which represents a net loss to the producer.

With money to spend for pumping equipment it is anticipated that it will be used conservatively during the coming summer, because weather conditions in this field have been such during the past winter that many wells have been inaccessible during the high water period and the delay in installing pumping equipment has therefore been lengthened materially.

New Methods Tried

It has been noted in the East Texas Field that many new methods of producing wells are being tried. It is stated that wells in some parts of the field will continue to flow oil and water even though the proportion of water to oil is as high as 60 per cent. The fluid level is high in wells that will not flow and this may bring about the installation of small complete pumping units, or the installation of central power suitable for such type of production.

When tubing is pulled, and this is made necessary in many wells because of paraffin trouble, the wells will flow. This will necessitate the installation of oil savers to reduce the loss of oil to a minimum.

Many operators are being guided by their past experience in other fields but taken as a whole East Texas is presenting many new problems to the operators who are solving them in many ways. This is opening the way to the use of many new devices and manufacturers of such equipment should find ample opportunity there to demonstrate the worth of their devices and find a ready sale if such devices prove satisfactory. With more than 5,000 wells still to be equipped for pumping there is a large market.

One manufacturer of oil and gas separators and steel tankage saw the need for a water separator as far back as last summer and employed a special engineer to make a study of the situation there. As a result he is now enjoying a nice business in a special water knock out trap that has been designed for this particular condition.

Electric motor driven pumping unit on well in Gladewater Townsite East Texas Field. This unit is used to agitate the well.

EAST TEXAS FIELDS

(Continued from Page 25)

feet, initial production 122 bbls. per hour through 1-inch tubing choke, total depth 3,591 feet; No. 1 Continental State Bank, top sand 3,583 feet, initial production 145 bbls. per hour through 1½-inch tubing choke, total depth 3,606 feet. Atlantic Oil & Production Co.'s No. 2 Clements, top sand 3,581 feet, initial production 33 bbls. per hour through tapered tubing, total depth 3,607 feet; No. 4 McKinley, top sand 3,635 feet, initial production 33 bbls. per hour through tapered tubing, total depth 3,686 feet; No. 1-A A. Tooke, top sand 3,531 feet, initial production 33 bbls. per hour through tapered tubing, total depth 3,570 feet. Atlantic Oil and Sun Oil Co.'s No. 3 M. Hays, top sand 3,490 feet, initial production 33 bbls. per hour through tapered tubing, total depth 3,521 feet. Atlantic and Wadley's No. 3 Turner estate, top sand 3,598 feet, initial production 22 bbls. per hour through tapered tubing, total depth 3,638 feet.

J. E. Beard's No. 1 J. M. Ferrell, top sand 3,611 feet, initial production 37 bbls. in 30 minutes through three-fourths inch tubing choke, total depth 3,626 feet. Black-Collins and Stroube's No. 2 J. L. Spurrier, top sand 3,545 feet, initial production 120 bbls. per hour through open tubing, total depth 3,594 feet. J. B. Bond and others' No. 1 J. H. Alexander, top sand 3,559 feet, initial production 38 bbls. in 40 minutes through 1-inch tubing choke, total depth 3,575 feet.

Cox and Hammon's No. 5 fee, top sand 3,527 feet, initial production 10 bbls. in 10 minutes through three-quarters-inch tubing choke, total depth 3,575 feet; No. 2 Lacy, top sand 3,500 feet, initial production 75 bbls. per hour through 1-inch tubing choke, total depth 3,551 feet; No. 8 L. A. Rodden, top sand 3,548 feet, initial production 151 bbls. per hour through open tubing, total depth 3,565 feet; No. 11 L. A. Rodden, top sand 3,591 feet, initial production 150 bbls. per hour through open tubing, total depth 3,612 feet. Deep Rock Oil Co.'s No. 2 H. Prichard, top sand 3,501 feet, initial production 71 bbls. per hour through 1-inch tubing choke, total depth 3,566 feet. East Texas Refining Co.'s No. 3 Tuttle, top sand 3,556 feet, initial production 75 bbls. per hour through 1-inch tubing choke, total depth 3,587 feet.

Farland and others' No. 1 Alexander, top sand 3,574 feet, initial production 50 bbls. in one-half hour through open tubing, total depth 3,594 feet. Gilcrease Oil Co.'s No. 4 A. Christian, top sand 3,580 feet, initial production 31 bbls. in one-quarter hour through open tubing, total depth 3,610 feet. Glasscock Brothers' No. 1 E. Bacle, top sand 3,632 feet, initial production 72 bbls. per hour through 1-inch tubing choke, total depth 3,650 feet. Gulf Production Co.'s No. 6 Fishburn, top sand 3,521 feet, initial production 120 bbls. per hour through three-quarters-inch tubing choke, total depth 3,494 feet. Hawkeye Petroleum Co.'s No. 2 McKinley, top sand 3,621 feet, ini-

tial production 71 bbls. per hour through 1-inch tubing choke, total depth 3,639 feet. D. W. Henke's No. 1 J. M. Christian, top sand 3,575 feet, initial production 76 bbls. per hour through 1-inch tubing choke, total depth 3,625 feet.

Humble Oil & Refining Co.'s No. 12 J. K. Edwards, top sand 3,582 feet, initial production 88 bbls. per hour through three-quarters-inch tubing choke, total depth 3,622 feet; No. 2 J. H. Sheppard, top sand 3,592 feet, initial production 77 bbls. per hour through three-quarters-inch tubing choke, total depth 3,592 feet. Kewanee Oil & Gas Co.'s No. 4 T. P. Railroad, top sand 3,608 feet, initial production 48 bbls. in one-half hour through 1-inch tubing choke, total depth 3,650 feet. W. T. Lee and others No. 1 fee, top sand 3,681 feet, initial production 32 bbls. in one-quarter hour through 1-inch tubing choke, total depth 3,688 feet. Lucy Petroleum Co.'s No. 2 A. M. Kinsell, location abandoned. Magnolia Petroleum Co.'s No. 2 S. Christian, top sand 3,678 feet, initial production 72 bbls. in 25 minutes through open tubing, total depth 3,692 feet; No. 2 Parnell, top sand 3,565 feet, initial production 233 bbls. per hour through open tubing, total depth 3,575 feet. Mission Oil Co.'s No. 2 Matthews, top sand 3,545 feet, initial production 60 bbls. in one-quarter hour through open tubing, total depth 3,584 feet.

Peterson and Merritt's No. 1 Hamm, top sand 3,616 feet, initial production 100 bbls. per hour through three-quarters-inch tubing choke, total depth 3,644 feet. Oto Phillips and others' No. 2 Chaney Jones, top sand 3,632 feet, initial production 72 bbls. per hour through 1-inch tubing choke, total depth 3,660 feet. Prince Brothers' No. 2 H. M. Williams, top sand 3,620 feet, initial production 130 bbls. per hour through 1-inch tubing choke, total depth 3,639 feet. A. D. Robinson and others' No. 2 L. Rodden, top sand 3,591 feet, initial production 27 bbls. in one-quarter hour through 1-inch tubing choke, total depth 3,596 feet.

T. S. Schroeder and others' No. 3 J. Bumpass, top sand 3,531 feet, initial production 45 bbls. in one-quarter hour through open tubing, total depth 3,598 feet. Segnal and McCall's No. 4 Missie Young, top sand 3,510 feet, initial production 25 bbls. in one-quarter hour through eleven-sixteenths-inch tubing choke, total depth 3,673 feet. Selby and Lewis' No. 5 L. C. Ingram, top sand 3,542 feet, initial production 50 bbls. in one-half hour through 1-inch tubing choke, total depth 3,583 feet.

Simms and Stanolind Oil & Gas Co.'s No. 5-B Flewellen, top sand 3,673 feet, initial production 35 bbls. in one-quarter hour through open tubing, total depth 3,697 feet. E. L. Smith and others' No. 2 E. E. Anderson, top sand 3,617 feet, initial production 45 bbls. in one-quarter hour through open tubing, total depth 3,640 feet. Southland Oil Co.'s No. 2 Colvin Christian, top sand 3,562 feet, initial production 72 bbls. per hour through 1-inch tubing choke, total depth 3,673 feet. Stanolind Oil & Gas Co.'s No. 4 Cox and Hammon, top sand 3,496 feet, initial production 142 bbls. per hour through open tubing, total depth 3,540 feet. Sun Oil Co.'s No. 5 Tate, top sand 3,484 feet, initial production 68 bbls. per hour through 1-inch tubing choke, total depth 3,541 feet.

Tidal Oil Co.'s No. 7 Castleberry, top sand 3,576 feet, initial production 35 bbls. in one-half hour through open tubing, total depth 3,603 feet; No. 7 Sheppard, top sand 3,598 feet, initial production 31 bbls. in 10 minutes through open tubing, total depth 3,610 feet. Wiseman and others' No. 1 C. Jones, location abandoned. Yount Lee Oil Co.'s No. 4-C Lathrop, top sand 3,602 feet, initial production 73 bbls. per hour through eleven-sixteenths-inch tubing choke, total depth 3,622 feet; No. 1 Pine Hill Church, top sand 3,564 feet, initial production 81 bbls. per hour through eleven-sixteenths-inch tubing choke, total depth 3,584 feet.

South Gregg County

A. B. C. Syndicate's No. 2 McNeeley, top sand 3,625 feet, initial production 71 bbls. per day pinched, total depth 3,626 feet. Atlantic Oil Producing Co.'s No. 5-A Andrews, top sand 3,583 feet, initial production 32 bbls. per hour through tapered tubing, total depth 3,602 feet. Atlantic and Byrd-Frost's No. 4 Wadley, top sand 3,623 feet, initial production 9 bbls. in 20 minutes through tapered tubing, total depth 3,630 feet. Russell and Davis' No. 1 Anderson, abandoned, total depth 3,556 feet.

Gulf Production Co.'s No. 1 A. King, top sand 3,547 feet, initial production 90 bbls. per hour through three-quarters-inch tubing choke, total depth 3,572 feet; No. 1 Nichols, top sand 3,681 feet, initial production 70 bbls. per hour through three-quarters-inch tubing choke, total depth 3,688 feet. Humble Oil & Refining Co.'s No. 7 D. Thomas, top sand 3,535 feet, initial production 52 bbls. per hour through three-quarters-inch tubing choke and 312,000,000 feet of gas, total depth 3,606 feet. Jones and O'Brien's No. 3 Hughey Ross, top sand 3,511 feet, initial production 72 bbls. per day pinched, total depth 3,556 feet. Frank Hines' No. 1 G. Davis, abandoned, total depth 3,630 feet. Landes and others' No. 1 M. B. Hughey, top sand 3,541 feet, initial production 50 bbls. per hour through five-eighths-inch tubing choke, total depth 3,579 feet. Lion Oil & Refining Co.'s No. 2 A. A. King, top sand 3,586 feet, initial production 20 bbls. in 10 minutes through 1-inch tubing choke, total depth 3,636 feet.

McBride's No. 1 Elder, top sand 3,541 feet, initial production 71 bbls. per day pinched, total depth 3,570 feet. Magnolia Petroleum Co.'s No. 5 M. S. Hughy, top sand 3,517 feet, initial production 176 bbls. per hour through three-quarters-inch tubing choke, total depth 3,525 feet. Magnolia Petroleum Co.'s No. 4 Hughey, top sand 3,490 feet, initial production 180 bbls. per hour through 2½-inch tubing choke, total depth 3,495 feet. K. E. Merren and others' No. 2 Will Hawkins, top sand 3,642 feet, initial production 71 bbls. per day pinched, total depth 3,565 feet. Harry Moss' No. 4 F. Marshall, top sand 3,528 feet, initial production 71 bbls. per day pinched, total depth 3,565 feet. Quad Oil Corp.'s No. 1-B Duncan, top sand 3,604 feet, initial production 71 bbls. per day pinched, total depth 3,612 feet.

Sam Shelbourne's No. 1 Knight and Tabor, top sand 3,600 feet, initial production 71 bbls. per day pinched, total depth 3,619 feet. Solar Exploration Co.'s No. 1 J. Elder, top sand 3,554 feet, initial production 71 bbls. per day pinched, total depth 3,589 feet. Stanolind Oil & Gas Co.'s No. 3 Clayton heirs, top sand 3,547 feet, initial production 80 bbls. per day through tubing, total depth 3,602 feet. Sun Oil Co.'s No. 2 G. Reese, top sand 3,691 feet, initial production 73 bbls. per hour through open tubing, total depth 3,699 feet.

S. O. Thompson and others' No. 1 Cole, top sand 3,546 feet, initial production 25 bbls. in 15 minutes through three-fourths inch tubing choke, total depth 3,563 feet. Tidal Oil Co.'s No. 3 C. C. Strong, top sand 3,625 feet, initial production 80 bbls. per hour through 2-inch tubing choke, total depth 3,631 feet. Welch and Sandler's No. 2 D. Barnett, top sand 3,727 feet, initial production 71 bbls. per day pinched, total depth 3,731 feet. Wells and Gann's No. 3-B Mary Charles, top sand 3,638 feet, initial production 71 bbls. per day pinched, total depth 3,649 feet. Westheimer and Daube's No. 1 J. T. Florence, dry and abandoned, total depth 3,670 feet.

North Rusk County

Bay Oil Corp.'s No. 3 W. P. Moore, top sand 3,801 feet, initial production 50 bbls. per hour open through 2-inch tubing choke, total depth 3,804 feet. Mills Bennett's No. 8 Brightwell, top sand 3,575 feet, initial production 71 bbls. per day pinched, total depth 3,625 feet. Cordova Union Oil & Gas Co.'s No. 1-B C. O. Christian top sand 3,771 feet, initial production 71 bbls. per day pinched, total depth 3,775 feet. Everts Drilling Co.'s No. 3 C. O. Christian, top sand 3,572 feet, initial production 71 bbls. per day pinched, total depth 3,775 feet. Cosby Nelson and Crole's No. 1 D. Wade, top sand 3,600 feet, initial production 71 bbls. per day pinched, total depth 3,731 feet. Great Eastern Oil Co.'s No. 1 C. O. Christian, top sand 3,731 feet, initial production 71 bbls. per day pinched, total depth 3,744 feet.

Gulf Production Co.'s No. 9 W. Florence, top sand 3,733 feet, initial production 70 bbls. per hour through three-fourths inch tubing choke, total depth 3,760 feet; No. 5 R. Russell, top sand 3,589 feet, initial production 88 bbls. per hour through three-fourths inch tubing choke, total depth 3,624 feet. Iotex Oil Co.'s No. 1 R. H. Beall, top sand 3,724 feet, initial production 71 bbls. per day pinched, total depth 3,725 feet. Republic Production Co.'s No. 3 Scroggins, top sand 3,715 feet, initial production 71 bbls. per day, pinched, total depth 3,732 feet. Stanolind Oil & Gas Co.'s No. 5 J. S. Powers, top sand 3,688 feet, initial production 121 bbls. per hour through open tubing, total depth 3,691 feet.

Cherokee County

V. C. Clopton and Hawkins' No. 1 A. P. Pace, top sand 3,662 feet, dry and abandoned, total depth 3,665 feet.

South Rusk County

Berry and Lews' No. 2 Deason, abandoned, total depth 1,420 feet. Blackwell Oil & Gas Co.'s No. 6 Samp Stone, top sand 3,658 feet, initial production 30 bbls. in 30 minutes through open tubing, total depth 3,678 feet. British American's No. 6 J. D. Stone, top sand 3,628 feet, initial production 61 bbls. in 10 minutes through open casing and tubing, total depth 3,662 feet. Conservative Oil Co.'s No. 7 Lizzie Harmon, top sand 3,737 feet, initial production 180 bbls. per hour through 1-inch tubing choke, total depth 3,800 feet. C. A. Evert's No. 1 Cole, top sand 3,815 feet, initial production 125 bbls. per hour through open tubing, total depth 3,819 feet.

Golding and Murchinson's No. 7 Kinney, top sand 3,602 feet, initial production 90 bbls. per hour through open tubing, total depth 3,689 feet. Goodgame and Eby's No. 1 W. W. Holland, top sand 3,829 feet, initial production 120 bbls. in 12 hours, 24 per cent salt water, total depth 3,818 feet. Gulf Production Co.'s No. 1 A. H. Rayford, top sand 3,703 feet, initial production 55 bbls. per hour through three-fourths inch tubing choke, total depth 3,711 feet. No. 2-A A. H. Rayford, top sand 3,704 feet, initial production 75 bbls. per hour through three-fourths inch tubing choke, total depth 3,712 feet. Humble Oil & Refining Co.'s No. 9 W. L. Price, top sand 3,735 feet, initial production 40 bbls. in 30 minutes through three-fourths inch tubing choke, total depth 3,783 feet; No. 5-A R. E. L. Silvey, top sand 3,657 feet, initial production 50 bbls. in 30 minutes through three-fourths inch tubing choke, total depth 3,764 feet; No. 5 A. L. Walker, top sand 3,644 feet, initial production 41 bbls. in 30 minutes through three-fourths inch tubing choke, total depth 3,652 feet; No. 4 Mattie Wooster, top sand 3,719 feet, initial production 41 bbls. in 30 minutes through three-fourths inch tubing choke, total depth 3,766 feet. H. L. Hunt's No. 4-C Fair, top sand 3,656 feet, initial production 72 bbls. per day pinched, through tubing, total depth 3,760 feet; No. 4-A Maxwell, top sand 3,740 feet, initial production 72 bbls. per day pinched, through tubing, total depth 3,788 feet.

Magnolia Petroleum Co.'s No. 2 S. W. Moores, top sand 3,655 feet, initial production 49 bbls. in 5 minutes through tubing, total depth 3,674 feet. Mid-Kansas Oil & Gas Co.'s No. 1 Jim Lunsford, top sand 3,663 feet, initial production 172 bbls. per hour through tubing, based on 15-minute gauge, total depth 3,697 feet; No. 1 George W. Moore, top sand 3,612 feet, initial production 145 bbls. per hour through open tubing, based on 15-minute gauge, total depth 3,631 feet.

Sinclair Oil & Gas Co.'s No. 17 Kinney, top sand 3,640 feet, initial production 45 bbls. in 15 minutes through open tubing, total depth 3,652 feet; No. 1 D. Ledbetter, top sand 3,583 feet, initial production 45 bbls. in 15 minutes through open tubing, total depth 3,605 feet. Stewart and Duffy's No. 1 Lawn, top sand 3,830 feet, initial production 12 bbls. in 15 minutes through 1-inch tubing choke, total depth 3,832 feet. Tidal Oil Co.'s No. 7 Pinkston, top sand 3,775 feet, initial production 21 bbls. in 10 minutes through open tubing, total depth 3,804 feet. Tulsa Oil Co.'s No. 2 J. E. Wheelis, top sand 3,769 feet, initial production 120 bbls. per hour through open tubing, total depth 3,774 feet.

Smith County

Big Indian Oil Co.'s No. 5 Wolford, top sand 3,620 feet, initial production 60 bbls. in 15 minutes through open tubing, total depth 3,628 feet. Deaner and Reynolds' No. 1 J. B. Wilson, top sand 3,744 feet, initial production 45 bbls. in 15 minutes through open tubing, total depth 3,750 feet.

Johnson and Owens' No. 2 Jackson, dry and abandoned, total depth 3,120 feet. Hamp Florence's No. 1 S. S. Cooke, top sand 3,775½ feet, initial production 35 bbls. per hour through open tubing, total depth 3,778 feet. Mash and Bloxom's No. 1 Frank Cole, top sand 3,810 feet, initial production 80 bbls. in one-half hour through open tubing, total depth 3,812 feet. Pinegrove Oil Co.'s No. 2 S. S. Cooke, top sand 3,694 feet, initial production 50 bbls. in one-fourth hour through open tubing, total depth 3,698 feet.

Sinclair Oil & Gas Co.'s No. 11-A Jarvis, top sand 3,680 feet, initial production 40 bbls. in one-fourth hour through open tubing, total depth 3,690 feet; No. 6-C Jarvis, top sand 3,700 feet, initial production 50 bbls. per hour through open tubing, total depth 3,703 feet; No. 11 Dora Wright, top sand 3,716 feet, initial production 60 bbls. in one-fourth hour through 1-inch tubing choke, total depth 3,720 feet. Sun Oil Co.'s No. 8 J. D. Henson, top sand 3,665 feet, initial production 22 bbls. per hour through tapered tubing, total depth 3,669 feet; No. 2-B H. A. Pace, top sand 3,721 feet, initial production 99 bbls. in one-half hour through open tubing, total depth 3,725 feet; No. 2-B A. V. Ritch, top sand 3,700 feet, initial production 50 bbls. per hour through tapered tubing, total depth 3,708 feet. The Texas Company's No. 1-B Jarvis, top sand 3,700 feet, initial production 74 bbls. per hour through three-fourths-inch tubing choke and 2-inch tubing choke, total depth 3,712 feet.

Upshur County

Barkley and Lincoln's No. 2 T. B. Webb, top sand 3,705 feet, initial production 27 bbls. in 14 minutes through 1-inch tubing choke, total depth 3,732 feet. Clarkston and others' No. 2 E. O'Byrne, top sand 3,632 feet, initial production 89 bbls. per hour through 1-inch tubing choke, total depth 3,665 feet. Danciger Oil & Refining Co.'s No. 2 J. N. Taylor, top sand 3,743 feet, initial production 31 bbls. in one-fourth hour through 1-inch tubing choke, total depth 3,754 feet. Galvez Oil Co.'s No. 3 W. W. Holland, top sand 3,638 feet, initial production 70 bbls. in one-half hour through 1-inch tubing choke, total depth 3,655 feet. Humble Oil & Refining Co.'s No. 2-B O'Byrne, top sand 3,651 feet, initial production 15 bbls. in one-fourth hour through three-fourths-inch tubing choke, total depth 3,671 feet; No. 1-D O'Byrne, top sand 3,785 feet, initial production 70 bbls. per day by heads, total depth 3,790 feet.

Oklahoma Production Corp.'s No. 1 Edwards Cemetery, location abandoned. Perrin and Fell's No. 2 C. C. Landers, top sand 3,743 feet, initial production 15 bbls. in nine minutes through 1-inch tubing choke, total depth 3,752 feet. Sun Oil Co.'s No. 4 J. Hargroves, top sand 3,728 feet, initial production 86 bbls. per hour through tapered tubing, total depth 3,736 feet; No. 3 A. J. Watkins, top sand 3,677 feet, initial production 36 bbls. per hour through tapered tubing, total depth 3,701 feet.

Van Zandt County

Pure Oil Co.'s No. 1 J. F. McPherson, initial production 20 bbls. per hour through eleven-sixteenths-inch tubing choke, total depth 2,959 feet; No. 4 L. A. Smith, initial production 450 bbls.

through eleven-sixteenths-inch tubing choke, total depth 2,935 feet.

Daily average oil shipments from East Texas, week ending April 4:

SHIPMENTS THROUGH MAIN TRUNK LINES	
Company, size and location—	Amt.
Arkansas P. L. Co., 8-in., Shreveport	10,124
Atlantic P. L. Co., 10-in., Atreco	19,538
Atlas P. L. Co., 8-in., Shreveport	3,376
Gulf P. L. Co., 2 and 8-in., Oklahoma	19,634
Gulf P. L. Co., 2 and 8-in., Port Arthur	14,232
Humble P. L. Co., 2 and 10-in., Shreveport	28,548
Humble P. L. Co., 2 and 8-in., Todd	46,258
Liberty P. L. Co., 8-in., Rusk	2,045
Magnolia P. L. Co., 10-in., Center	22,707
Magnolia P. L. Co., 12-in., Corsicana	14,518
Shell P. L. Corp., 10-in., Houston	28,594
Sinclair Prairie P. L. Co., 12-in., Teague	22,403
Sun-Yount Lee P. L. Co., 10-in., Sun City	32,054
Texas P. L. Co., 10-in., Douglass	21,816
Texas Empire P. L. Co., 12-in., Port Arthur	29,807
Tidal Ref. Co., 6-in., Carthage	3,150
Total	339,804
SHIPMENTS TO REFINERIES	
Arrow Ref. Co., Overton	S.D.
Beacon Ref. Co., Henderson	621
Boone Ref. Co., Arp	625
Central Ref. Co., Friars Switch	S.D.
Constantin Ref. Co., Overton	S.D.
Diamond Ref. Co., Overton	451
East Texas Ref. Co., Longview	9,007
East Texas Ref. Co., Friars Switch	S.D.
Gladetex Ref. Co., Gladewater	215
Gladewater Ref. Co., Gladewater	450
Guillory Ref. Co., Kilgore	225
Kilgore Ref. Co., Kilgore	350
Overton Ref. Co., Overton	767
Petroleum Refractionating Co., Longview	S.D.
Sinclair Ref. Co., Longview	1,030
Slack Ref. Co., Camps Switch	S.D.
Southern Oil Ref. Co., Reeds Switch	425
Taylor Ref. Co., Tyler	401
V. O. E. Ref. Co., Gladewater	S.D.
Total	14,567
SHIPMENTS BY TANK CAR	
Tyler P. L. Co. from Tyler	197
East Texas Ref. Co. from Longview	228
Cherokee Chief from Gladewater	125
Total	550
Total daily average distribution	354,921
Total daily average production	337,569
Daily average from storage	17,352

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OIL PRODUCERS ARE NOW $237,000 PER DAY RICHER

(Continued from Page 18)

from the field during the regular settlement period during which oil is run, exclusive of oil sold under contracts made prior to 7 a. m. June 3, 1931." The Humble company paid 90 cents per bbl. for East Texas crude in the first six days of April and then made a flat price of 83 cents which maintained until 7 a. m. on April 11.

The following statement signed by W. S. Farish, president of the Humble Oil & Refining Co. was issued in announcing its revised prices effective April 11.

"Humble Oil & Refining Co. meets the advance in prices recently initiated by Mid-Continent producers and producer-refiners who produce more oil than they refine. Its delay in meeting the new prices resulted from a sincere and deliberate conviction that current economic conditions do not warrant an increase in prices, and the decision finally to meet the advance is due in part to numerous urgent appeals from individuals, oil producers, trade organizations, newspapers and state officials and in part to its desire not to penalize the producers who sell to it and who probably could find no other market.

"This company desires higher prices for crude oil just as much as any producer does, but it is convinced that higher prices can prevail only if they rest on a firm economic foundation. Present product prices do not justify purchasers in paying more for crude. This price advance is admittedly based on the hope that better product prices and improved economic conditions generally will follow.

"Over the period of five months since the last price advance in November, 1931, this company has been unable to secure for products from its refineries and from the operation of its transportation system to its refineries any profit on the crude bought, transported and refined. At the present time it is buying more oil than it wants, and it has endeavored persistently during recent weeks to reduce its takings but it has been unable to do so without working a hardship on the producers whom it serves.

"Producers cannot hope to command a higher price for crude oil as long as the amount they offer for sale is greater than purchasers are willing to buy. Balancing supply with demand is imperative if the new price schedule is to be maintained.

"Responsibility for securing this balance rests squarely upon those who have initiated and sponsored this price advance including the producers, trade organizations, newspapers and officials."

The Gypsy Oil Co. in Kansas and Oklahoma, and the Gulf Pipe Line Co. in Texas followed the Stanolind in advancing prices, the Gulf also meeting the Texas Co.'s price increase in the Gulf Coast but ending its upward schedule at 35 degrees and above at 91 cents. The Gypsy-Gulf prices were effective April 11. The Carter Oil Co. in Kansas and Oklahoma met the Continental Oil Co.'s prices but started its schedule at below 25 degrees, 68 cents and adding 2 cents for each degree upward to 40 and above at $1, effective April 11. The Mid-Continent Petroleum Corp. in Oklahoma met the Continental prices, effective April 11.

The Ohio Oil Co. broke into the price-raising picture by increasing Elk Basin, Grass Creek, Big Muddy and Rock Creek, Wyoming crudes, 15 cents per barrel and Lance Creek, Wyoming, 10 cents and Sunburst, Montana, 5 cents, all effective April 11. It advanced Illinois, Indiana, Lima, Western Kentucky and Princeton crudes 15 cents per barrel and Wooster, Ohio, crude 10 cents per barrel. Salt Creek, Wyoming, crude automatically changes with the Stanolind Crude Oil Purchasing Co.'s Oklahoma prices, but stops at 37 degrees and above.

The Midwest Refining Co. met the Ohio Oil Co.'s prices in the fields in which both purchase in the Rocky Mountain area and also posted Cat Creek, Mont. to $1.20; Dutton Creek, Wyo. to 82 cents; LaBarge was placed in the Mid-Continent gravity scale. The Continental Oil Co. advanced Florence, Colo. to 80 cents; Fort Collins, Colo. to 86 cents; Wellington, Colo. to 76 cents and Greasewood, Colo. to $1.00.

In Louisiana and Arkansas all companies met the Texas Company's price schedule starting at below 25 degrees, 68 cents with 2 cents added for each degree upward to 40 and above at $1. All companies met the Texas Company's price of 65 cents in Smackover and The H. L. Hunt Co. advanced Urania, La. crude to 60 cents.

All companies met the Texas Company's advances in the Gulf Coast Field.

The Ashland Refining Co. posted Somerset, Ky. crude at 80 cents and the Joseph Seep Purchasing Agency posted Corning, Ohio, crude at 95 cents.

Nelson K. Moody Heads Two New Companies of Consolidated Oil Corp.

An official statement issued from the headquarters of the Consolidated Oil Corp. confirms The Oil and Gas Journal's announcement of the election of officers of the Sinclair Prairie Oil Co. and Sinclair Prairie Pipe Line Co. but the statement did not give the names of all the officers or of the boards of directors.

William L. Connelly is chairman of the board of directors of the Sinclair

Nelson K. Moody

Prairie Oil Co.; Henry L. Phillips, president, and Dana H. Kelsey, vice president in charge of the land department. C. H. Kountz is chairman of the board of the Sinclair Prairie Pipe Line Co., and John R. Manion, president, succeeding W. F. Gates, who remains a member of the board of directors.

Nelson K. Moody has been elected president of the newly organized Sinclair Prairie Gas Co. and president of the Sinclair Prairie Crude Oil Purchasing Co.

CALIFORNIA DISTRICT ELECTS NEW OFFICERS

LOS ANGELES, Calif., Apr. 9.—The California district, A.P.I. production division, has elected the following district officers: R. D. Copley (chairman), Standard Oil Co.; Bruce Barkis (vice chairman for Los Angeles Basin), Rio Grande Oil Co.; F. W. Hertel (vice chairman for Ventura district), Associated Oil Co.; J. J. Wilt (vice chairman for San Joaquin Valley), Standard Oil Co.; Norval White (secretary), American Petroleum Institute; and W. G. Corey (treasurer), Pacific Gear & Tool Works, Inc.

The following advisory committee was elected: W. L. McLaine (chairman), General Petroleum Corp.; R. D. Copley (ex officio), Standard Oil Co.; J. A. Bermingham, The Texas Company; W. B. Blodget, Chanslor-Canfield Midway Oil Co.; R. E. Collom, Continental Oil Co.; A. T. Jergins, Jergins Syndicate; C. S. Jones, Rio Grande Oil Co.; J. A. Jones, Associated Oil Co.; A. C. Mattei, Honolulu Consolidated Oil Co.; Ross McCollum, Signal Oil & Gas Co.; M. E. Lombardi, Standard Oil Co.; H. R. MacMillan, MacMillan Petroleum Corp.; William Reinhardt, Kettleman North Dome Association; A. C. Rubel, Union Oil Co.; J. U. Stair, Shell Oil Co.; R. R. Templeton, Pacific Western Oil Co.; C. P. Watson, Milham Exploration Co.; and W. C. Whaley, Barnsdall Oil Co.

OIL ASSOCIATION MEETING

CHATHAM, Ontario, Apr. 9.—The annual meeting and dinner of the Oil and Gas Association of Alberta is being held at Calgary on April 13.

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4-14-32

Personal Paragraphs About Oil Men

F. S. Seeley, Humble Oil & Refining Company, has moved from McCamey to Tyler, Tex.

* * *

G. R. Henson, of the Shell Petroleum Corporation, Tulsa, has been transferred to St. Louis, Mo.

* * *

K. W. Shimeall, of the Continental Oil Company, has moved from Ponca City, Okla., to Houston, Tex.

* * *

Walter Cameron, of Hanford, Calif., was elected president of the Whepley Oil Company at Fresno, Calif.

* * *

C. E. Whitney, sales manager for Baker Oil Tools, Inc., is on a business trip through Kansas, Oklahoma and Texas.

* * *

R. H. Trench, director of the British Burmah Petroleum Company, Ltd., has returned to London from a visit to Burma.

* * *

John Braybrook, who has been with the Tropical Oil Company in the Colombia fields for three years, has arrived in Petrolia, Ontario, on three months' furlough.

* * *

Dr. A. J. Walker, a member of the staff of one of the largest oil company hospitals in the Venezuela fields, is visiting Calgary, Alberta, for the first time since 1922.

* * *

H. P. Grimm, president of the Pacific Western Oil Company, has resigned as chairman of the unsecured creditors' committee of the Richfield Oil Company of California.

* * *

Harry L. Delander, former general advertising manager for the Crane Company, has been reappointed to that position. He succeeds W. K. Glen, promoted to divisional manager.

* * *

W. Chalmers Burns, formerly vice president and director in charge of sales, was elected to a newly created position, executive vice president, at a recent directors' meeting of the Richfield Oil Corporation of New York.

* * *

Doctor Sato, of the South Manchurian Railroad, Darien, Japan, and Mr. Kawai of Mitsubishi, Japanese distributors for Tide Water products, visited the Bayonne refinery of that company recently during a tour of the United States.

* * *

William Braybrook, who has been spending three months on furlough with his parents, Mr. and Mrs. Frank Braybrook at Petrolia, Ontario, has left via New York to rejoin the staff of the International Petroleum Company at Talara, Peru.

* * *

Cleve Phillips and family have moved to Corpus Christi from San Angelo, Tex. Mr. Phillips is in the scouting and land department of the California Company. He is one of the oldest scouts in West Texas in years of service in that district.

* * *

Joseph W. Bartlett, formerly general superintendent of the Houston Gulf Gas Company, and the Dixie Gulf Gas Company, Houston, Tex., and now a consulting engineer with offices at Dallas, Tex., spent several days in Houston on business.

* * *

H. W. C. Prommel, Denver, Colo., oil and mining engineer and geologist, has returned from a two-year stay in Russia where he went under a contract with the Soviet government. After spending several months in Moscow, he and his assistants made a 7,500-mile trip by horse, wagon, train and automobile through southwestern Siberia, in what was known as Turkestan, but now called Kazatskan. The second year was spent in the Caucasas Mountains. He expects to return to complete his work. He was chief consulting geologist for Tzetmetzoloto, the trust in charge of nonferrous mines for the Soviet, and for the northern Caucasian nonferrous metal trust.

Ramon Munoz, petroleum engineer, Monterrey, Mexico, has been in Houston, Tex., on a short business trip.

* * *

James Kewley is continuing for a second year as president of the British Institution of Petroleum Technologists.

* * *

W. J. Semple has been elected a director of Standard Oil Co. of Ohio to succeed J. S. Harrison, who resigned some time ago.

* * *

Porter Williamson, superintendent of the Houston Oil Company, has been transferred from Arkansas to Kilgore, and will be in charge of operations for the company in East Texas.

Men of the Industry

Jack Gaddess

Jack Gaddess, chief geologist and engineer and assistant manager of the North Penn Gas Company, and affiliated companies, was born in Oil City, Pa., December 15, 1903. His experience in the natural gas industry began in 1926 with the Dempseytown (Pa.) Gas Company in mapping properties, wells, and pipe lines of this company. In that year the engineering and geological work of the Alum Rock Gas Company, an affiliated organization, was assumed by Mr. Gaddess. In 1927, he was assigned the land department and engineering work of the Allegany Gas Company, an affiliated concern, operating in the Potter-McKean County Field. In 1929 he was made production engineer and chief geologist of the holding company, the North Penn Gas Company and affiliated companies. In 1931 he was promoted to assistant manager of the North Penn Gas Company and in 1932 was made vice president of the Potter Development Company, an affiliated producing company operating in deep sand territory in northern Pennsylvania.

Mr. Gaddess supervised geological surveys and made recommendations for the location and drilling of the first test well in the Tioga County gas field in Pennsylvania, which in September, 1930, came in with an initial flow of 25,000,000 feet of gas per day. This discovery well today has a shut-in capacity in excess of 450,000,000 feet per day.

Mr. Gaddess is a graduate of the Oil City High School and was graduated from the School of Mines of the University of Pittsburgh in 1925. He is a member of Sigma Alpha Epsilon, and of Sigma Gamma Epsilon, honorary mining fraternity. He resides in Port Allegany, Pa.

A. O. Behling, Humble Oil & Refining Company, Tyler, Tex., has moved to San Antonio, Tex.

* * *

R. J. Carson, of Newfield, N. Y., is now with the Southern Natural Gas Company at Greenville, Miss.

* * *

Paul Weaver, chief geophysicist of the Gulf Production Company, Houston, Tex., was called to New York by the death of his sister.

* * *

James Romanes, of A. Beeby Thompson & Partners, consulting geologists and petroleum engineers, is on a visit to the Hanoverian oil fields of Germany.

* * *

J. F. Corcoran, Mid-Continent representative of the Trimont Manufacturing Company, is calling on the trade in Oklahoma after which he will go to Texas.

* * *

P. M. Lancaster, an official of Imperial Oil, Ltd., at Shanghai, China, sailed recently with Mrs. Lancaster for England, where they will remain for some time.

* * *

H. H. Hallett, superintendent of the Sun Pipe Line Company, is spending some time in Dallas, Tex., after being in the Philadelphia, Pa., offices for several months.

* * *

Dr. Donald C. Barton, consulting geophysicist, Houston, Tex., has returned from a motor trip to Monterrey, Mexico. He was accompanied by Mrs. Barton and a party of relatives.

* * *

Jacques Ribaud, of Les Consommateurs de Petrole, Paris, France, recently spent three weeks at the Bayonne refinery of the Tide Water Oil Company as part of a four months' study of American industries.

* * *

L. G. May, of Santa Fe, N. Mex., district manager of the Southern Union Gas Company, has been in northwestern New Mexico on company business and during his stay checked in a new local manager at Durango, Colo.

* * *

C. L. (Pop) Sutton, former superintendent of the American-Maracaibo in Fort Worth, Tex., and also the Smith Properties, is now general superintendent of the Tulsa Oil Company, subsidiary of the Standard Oil Company of Kansas, with headquarters in Wichita, Kans.

* * *

Harry Brier, plant manager of the Woven Hose Company, Boston, Mass., and Paul E. Mahaffey, president of the Happy Belting Company, are making a trip through the East Texas fields in company with Art Nixon, vice president and representative in Texas, for the latter company.

* * *

Ray Richmond, former superintendent for the Humble Oil & Refining Company, and proration umpire in the Yates Field and East Texas, is now production superintendent for the Girard Oil Company, with headquarters in Corsicana, Tex. This company recently purchased the Humble Oil & Refining Company's leases and wells in the Powell Field.

* * *

Clifton R. Swarts, petroleum engineer, is leaving Tulsa this week for New York City en route to a new position with the Lago Petroleum Corporation, at Maracaibo, Venezuela, South America. Mr. Swarts is a graduate of Stanford University, Palo Alto, Calif., in the class of 1919 and has an A.B. degree. He has followed oil field engineering since his graduation having worked in California until 1926 when he joined the Bureau of Mines, Bartlesville, Okla. In 1928 he went with the Pure Oil Company engineering staff in Tulsa and was with that company until recently. Mr. Swarts is an active member of the A.I.M.E. and has a wide acquaintance in California and the Mid-Continent oil fields, and his friends wish him every success in his new work in South America.

Natural Gas Industry Developments

SAN DIEGO GAS LINE READY BY SEPTEMBER

Negotiations have been completed to supply San Diego city and county, California, with natural gas on September 1, according to W. F. Raber, president of the San Diego Consolidated Gas & Electric Co. The company now serves manufactured gas to San Diego, La Jolla, Coronado, Pacific Beach, Ocean Beach, Oceanside, Escondido, National City, Chula Vista and San Ysidro.

Construction of the line will be under the direction of Southern Counties Gas Co., Los Angeles. Industrial Fuel Supply Co., affiliated with Southern Counties, will install 10½ miles of 16-inch line to Huntington Beach from Long Beach. Southern Counties will construct 68 miles of 12¾-inch line from Huntington Beach to Rose Canyon, near La Jolla, and San Diego Consolidated Gas & Electric Co. will construct 7 miles of line to San Diego. Cost will be $1,760,000.

The transmission line will parallel the Coast Highway, and all communities along the route will be served. Southern Counties Gas Co. has an assured supply of gas both from the Los Angeles Basin and from Kettleman Hills fields.

A new schedule of rates will be put into effect with the coming of natural gas, tentatively as follows:

For San Diego, Coronado and National City: First 200 feet or less per month, 90 cents net; next 800 feet, 14.5 cents net per 100; next 2,000 feet, 12 cents net per 100; next 7,000 feet, 10 cents net per 100; all over 10,000 feet, 9 cents net per 100.

The company's manufactured gas plant will be held in readiness as standby service, and the 9,000,000 feet of storage capacity will be used for natural gas storage. The present storage capacity of 75,000 gallons of butane, used for enriching purposes, will be increased to 225,000 gallons, for use with the oil gas as standby service.

Preparations are getting under way for the changeover from 550 B.t.u. to 1,100 B.t.u. gas, a force of approximately 400 men being schooled for the work.

PROGRESS IS REPORTED ON TWIN CITIES LINE

Progress is reported on plans for a 580-mile, 24-inch line from eastern Montana fields to Minneapolis and St. Paul, according to John F. Wight, secretary of the Great Northern Gas & Utilities Co. Two routes for the line have been mentioned, one from the southern end of the Cedar Creek anticline through Aberdeen and Watertown, S. Dak., to Minneapolis; the other, from the Bowdoin Dome in Montana, through Williston, Minot, Devils Lake and Grand Forks, N. Dak., to Minneapolis, Minn. Mr. Wight reports that additional surveys are being run which may change the routing. The development will cost $20,000,000.

Plans of the company for bringing natural gas to Minneapolis were approved on March 15 by the city council. The company is reported to have an open flow of 350,000,000 feet in the Baker-Glendive Field.

NEW CALIFORNIA LINE

LOS ANGELES, Calif., Apr. 9.—Santa Maria Gas Co. plans 21 miles of 8-inch line from the north bank of Santa Maria River to Oilport, above Pismo Beach, where the line will connect with the line into San Luis Obispo. Approximately $225,000 will be spent.

PROGRAM FOR TULSA MEETING OF NATURAL GAS DEPARTMENT

Final plans for the annual convention of the Natural Gas Department of the American Gas Association, to be held in Tulsa, May 9, 10 and 11, are being completed, a tentative working program having been released by A. E. Higgins, secretary of the department. T. J. Strickler, vice president and general manager of the Kansas City Gas Co., Kansas City, Mo., is chairman of the Natural Gas Department of the A.G.A.

All convention sessions will be held in the Crystal Ballroom of the Mayo Hotel, the first session beginning at 2 p.m. on Monday, May 9, several preconvention committee meetings also having been planned for that day. A joint meeting of the subcommittee on Code for Testing Natural Gas for Gasoline Content and a committee of the Natural Gasoline Association of America will be held Monday morning, May 9. The main technical and research committee and subcommittees will meet in the private dining room of the hotel Monday morning.

Registration of delegates, of which it is estimated there will be about 1,500, also will be taken care of Monday morning.

The annual meeting of the executive, managing and advisory committees will convene in the French room of the hotel on Monday evening, for a dinner and business session.

On the general session program will appear the following features:

Monday Afternoon, May 9

Opening Remarks—T. J. Strickler, chairman, Natural Gas Department, A. G.A.

Invocation—Dr. C. W. Kerr, First Presbyterian Church, Tulsa.

Address of Welcome—Mayor of Tulsa.

Address—E. A. Olsen, president, Oklahoma Natural Gas Corp., Tulsa.

Address of the Chairman—T. J. Strickler, vice president, Kansas City Gas Co.

Appointment of Committee on Chairman's Address—L. K. Langdon, vice chairman, Natural Gas Department.

Address—R. W. Gallagher, president, American Gas Association.

Address—Alexander Forward, managing director, American Gas Association, New York.

"This Changing World," a talk on oil, gas and the banks, their relation to public welfare, Walter S. Ferguson, vice president, Exchange National Bank, Tulsa.

Informal addresses by gas company executives.

Tuesday Morning, May 10

Appointment of Committee on Final Resolutions—T. J. Strickler, chairman, Natural Gas Department.

Dealer Co-operation, the Need and Justification for Utility Selling—LeRoy M. Edwards, general counsel, Southern Counties Gas Co., Los Angeles, Calif.

Dealer Co-operation by Affiliated Associations—A. E. Bettis, president, Missouri Association of Public Utilities, Kansas City, Mo.

Report of Main Technical and Research Committee and Subcommittees—H. C. Cooper, chief engineer, Hope Natural Gas Co., Pittsburgh, Pa.

Developing New Uses for Gas and the Need for Such Accomplishment—Henry O. Loebell, vice president, Combustion Utilities Co., New York.

Tuesday Afternoon, May 10

General Condition in the Industry—E. B. Reeser, president Barnsdall Corp., Tulsa.

Rate Legislation and Taxes—Judge H. O. Caster, Henry L. Doherty & Co., New York.

Large Diameter Transmission Lines—E. F. Schmidt, general superintendent, Lone Star Gas Co., Dallas, Tex.

Water Vapor in Natural Gas—C. H. M. Burnham, chief engineer, Colorado-Wyoming Gas Co., Denver, Colo.

Wednesday Morning, May 11

Wrinkles—H. J. Hoover, Natural Gas, Cincinnati, Ohio.

Report of Committee on Supply Men's Fund—J. B. Tonkin, vice president, Peoples Natural Gas Co., Pittsburgh, Pa.

Latest Developments in Production—H. A. Wallace, president, United Fuel Gas Co., Charleston, W. Va.

Conservation of Gas in Completion of Well Drilling and Gas Well Deliveries—N. C. McGowen, president, United Gas Public Service Co., Houston, Tex., and E. L. Rawlins, natural gas engineer, U. S. Bureau of Mines, Bartlesville, Okla.

General Utility Situation. J. F. Owens, president, National Electric Light Association, Oklahoma City, Okla.

Motion Picture of Rumania's Burning Well—M. M. Kinley, Kinley Brothers, Tulsa.

Wednesday Afternoon, May 11

Major Future Sales Problems—Samuel Insull, Jr., vice chairman, Middle West Utilities Co., Chicago, Ill.

Dehydration and Oil Fogging—R. M. Redding, general superintendent, Dallas Gas Co., Dallas, Tex.

Question Box and Discussion—J. D. Creveling, Henry L. Doherty & Co., New York.

Report of Committee on Chairman's Address.

Report of Committee on Final Resolutions.

Final business and closing remarks.

An interesting program of entertainment has been planned, beginning with a barbeque scheduled for 6:30 p.m. at the Tulsa Country Club on Monday, followed by an informal dance. A bridge luncheon for convention ladies will be held in the Mayo Hotel on Tuesday, May 10, and on Tuesday at 7:30 p.m., a cabaret banquet and dance will be held in the Crystal Ballroom of the hotel. There will be no speakers, and the entertainment committee has planned an unusual vaudeville entertainment for the occasion.

COLUMBUS, NEB., LINE

The routing of Northern Gas & Pipe Line Co.'s extension to Columbus, Neb., has been changed, and will run from David City, north toward Schuyler, crossing the Platte River and on to Columbus. The 6-inch main will end at a border station on the property owned by Central West Public Service Co. in Columbus. There the gas will be reduced to 35 pounds pressure and metered into the Central West company's mains. The company is constructing a belt line to carry the new gas to all mains and is eliminating all dead ends. Gas service is expected about May 1, according to Harry S. Thompson, manager at Columbus.

LEFLORE COUNTY GAS BUYS

The LeFlore County Gas & Electric Co., in conjunction with the Service Gas Co., has acquired the properties of the Junior Gas Co. and the Sooner Oil & Gas Co. in LeFlore County, Oklahoma. The Service company will operate the distribution systems at Heavener and Howe, formerly owned by the Junior Gas Co., and will continue distribution systems at Spiro and Red Oak. The American Indian Oil & Gas Co. will continue to distribute gas at Poteau and Cameron.

DEATH OF C. J. YORATH, CANADIAN GAS LEADER

CHATHAM, Ontario, Apr. 9.—Christopher J. Yorath, for years a leading figure in the natural gas industry in Alberta, died at Calgary the past week. He had been for a considerable time a

C. J. Yorath

sufferer from heart trouble and suffered a severe attack following the recent government conference on gas conservation in Edmonton.

Born at Cardiff, Wales, 52 years ago, Mr. Yorath was educated at Cardiff University. He came to Canada and was for some years city manager at Saskatoon, Saskatchewan, going to Edmonton, Alberta, as city finance and public works commissioner. He relinquished that post to become president and managing director of the Canadian Western Natural Gas, Light, Heat & Power Co. of Calgary and of Northwestern Utilities, Ltd., of Edmonton. The companies whose destinies he thus controlled handled the major part of the commercial natural gas production of Alberta, supplying the needs of Calgary, Edmonton, Lethbridge and a number of lesser communities.

Mr. Yorath was connected with a number of other utility companies in the Canadian West. He was a member of the Institute of Civil Engineers in Great Britain and of the Canadian Institute of Civil Engineers, and was for some years a director of the Natural Gas & Petroleum Association of Canada. He was a recognized authority on municipal problems.

NATURAL GAS LINES CANNOT CHANGE POLICY

AUSTIN, Tex., Apr. 11.—Natural gas pipe line operators told the Railroad Commission, in a conference on ratable taking of gas held here, that present economic conditions prevent their relaxing their policy of refusing to take part of their supply from other producers than their present connections.

They indicated, state officials said after the conference, that strict state gas conservation policies may later enable them to take some gas offered by other producers.

In most cases the pipe line operators are buying no gas, but taking only the production from wells under their same management.

The conferences followed a recent court decision sustaining the common purchaser of natural gas law.

Field Problems and Their Solution

EDITED BY THOMAS F. SMILEY

In order that men connected with the drilling, producing and transporting branches of the petroleum industry may procure quickly a solution of many problems confronting them from time to time in their work, The Oil and Gas Journal has arranged with leading engineers and other recognized authorities to answer questions submitted by readers of this publication pertaining to the work of drilling and producing crude oil and transporting this product.

Everyone is invited to submit questions freely. These questions will be submitted to proper authorities by Mr. Smiley, who edits the page, and answers, based on the best available information, will be published. Each question should give as much detail as possible, especially where it relates to matters where depths of sands, types of sands and operations on adjoining properties would have a bearing on the problem involved. The source of all questions will be considered as confidential and only initials will be published in connection with the question.

In this connection, The Oil and Gas Journal will be glad to publish articles from field men who have devised new methods or practices which are improvements.

In case an immediate answer is important, one will be given by mail if the writer requests it.

WHY THEY CALL IT OIL SAND

In H. C. George's "Oil Well Completion and Operation" I find the statement that the term "oil sand" originated in Pennsylvania, where the oil reservoir rocks in the first wells drilled were sandstones. This rock became finely pulverized by drilling operations and when it was brought to the surface in the bailer the driller is supposed to have thought it had existed in that same loose form in the underground stratum. I am wondering if this is exactly correct. Before oil was found in Pennsylvania, brine wells were drilled along the Allegheny River and streams feeding it. Is it to be supposed that these drillers of salt water wells never had discovered that they sometimes drilled into sandstone and not into loose sand?—L. L. S.

Since Professor George seemed to be the best person to answer your question, it was sent to him. Following is his reply:

"I think that not only the drillers of oil wells but also the drillers of brine wells along the Allegheny and its tributaries thought that the source of brine or oil and gas was loose sand, such as that on the seashore, and that it did not occur to them that the cuttings were pulverized sandstone. I have even known them to call a water bearing limestone sand, when the sludgings came up in grains about the size of sand grains.

"However, there were many, even in the first days of the industry, who believed that oil was secured from cavities in rocks. I quote from Petroleum and Petroleum Wells by J. H. A. Bone, published by J. B. Lippincott & Co., in 1865, on pages 13 and 14 as follows:

"'In the Pennsylvania oil regions the hills are capped with conglomerate, lying in geological succession next below the coal measures. Through this the well is bored, passing through alternate layers of shale and sandstone, and terminating in sandstone, where cavities exist, frequently filled with oil, gas and salt water.

"'In some parts of Oil Creek, and on the Allegheny, there are appearances of slight upheaval, forming cracks and fissures in the rocks, and it is here that many borers look most hopefully for oil in large quantities. According to Professor Evans, of Marietta, who has given the matter much study, the oil is contained in cavities or fissures in the rocks, in connection with both water and gas. These are arranged, of course, according to their weight, the water at the bottom, the oil floating thereon, and the gas (often strongly compressed) filling the upper part of the cavity. If such a cavity runs obliquely from above downward, a well when bored may strike either the water or the oil, or it may enter the gas chambers. In the first two cases, if the gas be compressed, as it usually is, there will be a spouting well—the water or oil or both together, being thrown out of the mouth of the boring. When the tension of the gas is exhausted, resort must be had to pumping, until the cavity is pumped out. But in some cases, a series of cavities communicate by small openings or crevices, in which case, a well may flow intermittently for a long time, as it is replenished by percolation through these channels.'"

"SQUEEZER" TYPE TRAPS

What physical laws are involved in settling water out of oil under pressure in the so-called "squeezer" type traps?—M. C. H.

The "squeezer" type trap is in fact a high-pressure trap and there are several different designs on the market, each incorporating special features. These special features introduce into the problem numerous other mechanical principles that are not directly related to the main question.

If a well is making oil and water that is not emulsified or gas-cut and this production is delivered into a trap upon which a high pressure is maintained, say 150 pounds or more, the only physical law that will effect separation of oil and water is the law of gravity. Water being of greater specific gravity than oil will settle toward the low point in the trap or vessel and thereby cause a separation.

Pressure applied to the trap does not have the least effect upon the law of gravity under these specific conditions, and rate of flow, size of receptacle, and size and position of inlet and discharge openings are the governing factors. All of the foregoing has to do with the separation of oil and water and does not apply to an emulsion of these two fluids. If an emulsion is to be considered there are mechanical and physical laws that can be utilized in effecting separation.

HUNTING OIL WITH MICROSCOPE

I want some information regarding the use of the microscope in hunting for oil. Can you tell me something about it or about books that I might read on the subject?—E. J. C.

It is customary to use binocular microscopes with 10 to 30 power lenses for study of cuttings from wells. Light is obtained from electric bulbs of various types set in suitable reflectors and stands. Direct lighting is used for this work. There are good books on the use of the microscope and any book store in your city can furnish you with a list of them from publishers' catalogs.

COURT DECISIONS CONFUSING

There is something rather bewildering in court decisions with reference to the ownership of gas and oil underground. For instance, the judges say a company may drill wells on its own property and drain oil from adjoining property without suffering any kind of penalty. If the owner of the adjoining property doesn't like it he must put down offset wells. The principle here seems to be that nobody knows just where the oil comes from, so the owner of the adjoining property can't prove that he has suffered any loss at all. But if the company which has leased this adjoining property refuses to put down an offset well, the owner of the land can sue the company and get damages. In this latter case it seems to be reasoned that they do know where the oil comes from. Is this consistent?—N. G. R.

The point you raise has confused other persons besides yourself. It was discussed at length by Robert E. Hardwicke of Fort Worth, Tex., before a division meeting of the American Petroleum Institute in Dallas, Tex. Mr. Hardwicke said:

"Courts and lawyers are still vigorously debating the question of whether oil and gas are subject to ownership in place. Due to the peculiar characteristics of oil and gas, and especially their ability to migrate, the courts in some jurisdictions hold that ownership cannot exist until the oil and gas are actually reduced to possession. Some of these courts go further and declare that the surface owners have a community of interest in the pool, and, consequently, one owner should not be permitted to waste the common supply. Carrying the doctrine to its logical conclusion means that no one should have more than his fair share of the minerals. As yet no rules of law have been established which will bring about that result.

"In other states it is held that, since an owner of land owns to the center of the earth, he necessarily has title to whatever oil and gas may be in or under his land, and the rights exist to appropriate whatever minerals may be produced by operations on the land, even though such minerals may migrate from adjoining tracts. This rule of property follows that relating to percolating waters.

"Where no question of conservation or police power is involved, the courts uniformly hold that an operator, by wells drilled on his lease, may drain oil and gas from under his neighbors' property, without any liability whatever. The remedy of the neighbor is to drill offset wells. This rule was originally predicated on the theory that it was impossible to establish the source of the oil and gas, therefore no substantial proof could be had as to the amounts of oil and gas which were drained from under another's land.

"Curiously enough, the same courts later held that, when a lessee fails to drill offset wells, the lessor may collect damages based upon the amount of oil and gas drained from under his land. The court or jury, from the evidence, determines to a barrel and cubic foot the amounts of oil and gas which pass from one tract to another. In other words, we have the anomaly of a court declaring a rule of property based on the impossibility of determining the source of oil and gas, and on the same day upholding a verdict in a damage suit in which the exact source, and the extent of their migrations, are proved to the barrel or the cubic foot. In one breath a court holds that an owner is entitled to his share of the minerals in the pool, and in the next breath refuses to enjoin a neighbor who is taking more than his fair share.

"Some courts hold that oil and gas in place are absolutely owned by the landowner under whose lands they may lie, but at the same time they hold that his neighbor can drain away every barrel of oil and every cubic foot of gas, even though the amount can be proved exactly, yet the landowner has no suit for damages and cannot enjoin the taking of what is admitted to be his. Such a doctrine is against all notion of ownership, and it is no answer to say that full protection may be secured by drilling offset wells."

WHY WAS IT CALLED THAT?

TORPEDO

"Torpedo" is a Latin word meaning stiffness or numbness, and long before there were any oil wells to be shot a certain fish was called the torpedo or numbfish because of its ability to impart an electric shock which numbed the recipient. Early in the nineteenth century a destructive weapon which had the general shape of this fish was introduced into naval warfare, and it was called a torpedo. It consisted of a shell containing an explosive. When the oil producer began the practice of exploding a shell containing nitroglycerin in a well hole to increase oil recovery he needed a designation for it and he borrowed the name already in use in the navy.

WANTS PRIMER ON GAS

I shall appreciate your recommending a gas book that is not too technical, in other words a sort of primer which will explain the taking of pressures and measuring volumes, reading meter charts, etc. I want a book which will explain things about the subjects in such manner that one lacking in experience or engineering education can understand what is meant. I have several men who need such a "vade mecum."—P. H. D.

This department can suggest no book more elementary than the "Natural Gas Handbook" by John Diehl. Methods of taking pressures and volumes of gas wells are described in that book in as simple a form as possible.

You might find some of this information in a different form in several technical papers, reports of investigations and bulletins published by the U. S. Bureau of Mines, and it is suggested that you write the U. S. Government Printing Office, Washington, D. C., for the "List of Publications, Bureau of Mines, 1910-1931," which has just been issued. In this book you will find listed numerous papers prepared by the Bureau of Mines engineers on natural gas and a brief description of the general suuject covered by each.

IS IT SUITABLE FOR DRY ICE?

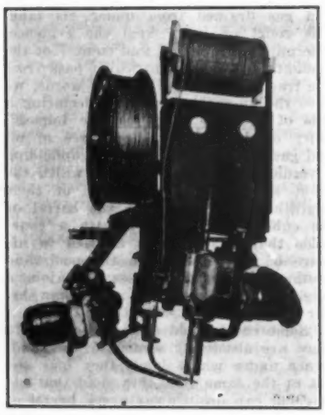
Would a 2,000,000-foot flow of carbon dioxide gas 99 per cent pure, remainder being oxygen and nitrogen, be considered commercial for dry ice production, location being ideal to markets?—H. C. P.

The location of the well making 2,000,000 feet of carbon dioxide gas would have a large bearing upon its commercial value. Gas as rich as you state should find a market but without more detailed information it is impossible to give a complete answer to your question.

Oil Industry Equipment and Supplies

NEW WELDING HEAD IS ANNOUNCED BY LINCOLN

A wire feeding head which allows automatic arc welding with the shielded arc process has been developed by the Lincoln Electric Co. of Cleveland, Ohio, manufacturer of "Stable Arc" welders and "Linc-Weld" motors. The result claimed for this head is high speed operation on either butt, fillet or building-up welding,



the deposited metal having physical characteristics equal to or better than mild steel.

The shielded arc technique is attained through the use of the electronic tornado welding head and a fibrous autogenizer which is fed into the arc flame. This autogenizer burns and forms a gas excluding the oxygen and nitrogen of the atmosphere while the metal is molten. The welding head utilizes a carbon arc around which is superimposed a magnetic field which directs the arc stream on the line of fusion.

Full automatic control of the arc is obtained, thus maintaining the heat of the arc constant. Speeds of travel of the head can be varied through a wide range.

Continuous filler metal is obtained from a reel mounted on the head and fed into the arc just in front of the arc travel. The rate at which the filler metal is fed into the arc is adjustable so that the amount of metal deposited can be varied to meet the conditions demanded by the speed of the head and the type of weld being made. Since the rate at which the filler can be fed is varied independently of the speed of the head travel, only one size of filler metal is necessary for any type of work within the range of the machine. The filler metal is usually in strip form which insures greater accuracy in feeding the metal in the arc.

It is asserted that the use of this automatic brings several important improvements to welding, including: 1. The filler metal carries no current and its size is independent of the current used for welding. One size of strip can be used for any current from 75 to 500 amperes. 2. As the filler does not carry current, spatter and waste are largely eliminated. 3. The filler strip does not pass through the arc, but beneath it, and therefore is not subject to the extremely high temperature of the arc stream. 4. It makes possible a practical method of shielded arc welding where it is desirable or necessary to add filler metal.

Tube borium and borod, characterized as "the hardest and most abrasive-resisting material," is the subject of an illustrated leaflet distributed by the Stoody Co., Whittier, Calif.

AMONG THE EQUIPMENT HOUSES

The Babcock & Wilcox Tube Co., Beaver Falls, Pa., has opened a new branch office in the Ford Building, Detroit, Mich., with J. E. Polhemus in charge.

D. H. Skeen & Co., 1 North La Salle Street, Chicago, have been appointed distributors for Tube-Turns, Inc., Louisville, Ky.

William S. Wilbraham, who has been in charge of the estimating and order department of Lukenweld, Inc., Contesville, Pa., since this organization was established in 1929, has been appointed assistant manager of sales.

Sterling Electric Motors, Inc., Los Angeles, Calif., has been made Pacific Coast representative for the Louis-Allis Co. explosion-proof self-ventilated motors, used extensively in the oil industry.

The Holo-Krome Screw Corp., Hartford, Conn., has been licensed by the Dardelet Threadlock Corp. to manufacture and sell socket head cap screws, hollow set screws, and countersunk pipe plugs threaded with the Dardelet self-locking thread.

Among papers presented at the annual meeting of the Western Petroleum Refiners Association in Excelsior Springs, Mo., this week is one by S. A. Guiberson, Jr., president of the Guiberson Diesel Engine Co., Dallas, Tex., discussing the new Guiberson Aero Diesel engine.

GOODYEAR STEAM HOSE STANDS SEVERE TESTS

Following a long period of development and field tests, the Goodyear Tire & Rubber Co., Akron, Ohio, has announced a steam hose, the carcass of which is made up of braided asbestos cords of high tensile strength.

The asbestos cord carcass has been put to severe tests. It had not failed at 788 hours, at which time the hose was removed and its bursting strength tested. It apparently had lost practically none of its ordinary hydrostatic strength. Not only is this hose made up of a carcass of asbestos, but it has a tube which, under test, is said to have outlasted any other compound available for this purpose. Previously, an ordinary steam hose tube in an ordinary carcass hose on a rack test without flexing has either hardened and cracked or become soft and swollen in less than 300 hours at 100 pounds steam pressure. The new tube stock designed for Goodyear asbestos cord steam hose was found to be firm, flexible and free from cracking, hardening, swelling or blistering after 4,000 hours.

FRICTION DECREASED IN TEMPERATURE REGULATOR

The Taylor Instrument Companies, Rochester, N. Y., have developed a new Tycos self-acting temperature regulator, the most important improvement in which is the practical elimination of friction.

Another element which is said to contribute to the performance of the Tycos regulator and its adaptability to a great variety of applications is the construction of the tube system. This consists of a double seamless bellows, extra heavy walled copper connection tubing and stainless steel bulb of exceptionally small size and thin wall.

This tube system requires a minimum volume of actuating medium, which makes a small bulb possible and together with the thin wall of the bulb and its shape results in a tube system that responds quickly to temperature changes. The overheating features of the tube system permit heating the bulb beyond the upper limit of the range of the instrument without injury.

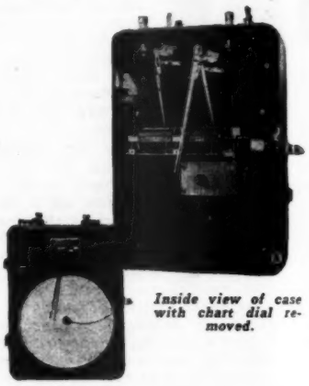
Uses of the instrument in the oil industry include crude-oil treating plants, hot water tanks, natural gasoline plants and fuel storage tanks.

NEW HOME OF THE OIL WELL SUPPLY CO., DALLAS, TEX.

INTEGRATING ORIFICE METER PUT ON MARKET

The Westcott integrating orifice meter developed by the American Meter Co., 105 West Fortieth Street, New York, is the Westcott orifice meter equipped with an integrator which gives a totalized indication of the quantity which has passed through the orifice for all rates of flow and all variations of pressure.

In any type of orifice meter or flowmeter the quantity of gas or steam varies



Inside view of case with chart dial removed.

Front view.

as the square root of the differential and as the square root of the pressure. Therefore any change in the pressure affects the rate and volume. A 10 per cent change in pressure will produce the same effect or change in the rate of flow as a 10 per cent change in the differential.

In this integrator the effect of the pressure on the rate or the volume is applied continuously for any value or change in pressure from the perfect vacuum to the maximum pressure range of the instrument. No multipliers or factors for change in pressure are required. The integrator extracts the square root of the differential each minute and multiplies the square root of the differential by the square root of the absolute pressure. The sum of the products is continuously totalized on a counter index. The difference between the readings obtained at the end and at the beginning of an interval multiplied by the meter constant gives the quantity which passed through the orifice during the interval.

Power is supplied by a Telechron clock. The primary multiplication is performed once a minute. All functions are performed mechanically and positively.

The chart record shows the rate of flow and the pressure at any time. It is a permanent record for reference.

The metric integrating flowmeter is the Westcott orifice meter without pressure spring, equipped with an integrator which gives a totalized indication of the quantity of gas or steam at constant pressure, or of liquids which pass through the meter regardless of the rate. Its mechanism is the same as described for the integrating orifice meter.

CAR HANDLES DRY PRODUCTS

The General American Tank Car Corp. announces that it has perfected a tank car known as the Dry-Flo, designed to handle granular commodities such as cement, silica sands, etc., as conveniently and efficiently as standard tank cars now handle liquids. This absolutely water tight car is provided with a single outlet at the bottom through which the bulk contents of the car are uniformly unloaded at a rate best adapted for subsequent handling by a simple conveying equipment.

Technical Questions Answered

BY CHARLES K. FRANCIS, PH.D., TECHNICAL EDITOR

This department of The Oil and Gas Journal is devoted to the manufacturing branches of the oil industry.

Those connected with the refining of crude petroleum, the manufacture of natural gasoline and closely allied industries are invited to submit their problems to Dr. C. K. Francis, technical editor. The department was created for the purpose of aiding managers, superintendents, engineers, chemists and all those engaged in the various phases of plant operation; also those connected with the marketing and utilization of petroleum products.

Questions should be submitted in as much detail as possible so as to assure a satisfactory answer.

All inquiries should be signed and if other than the given initials are to be used please indicate the desired letters.

Questions involving patented processes, intricate formulas, and calculations and estimates of costs, for obvious reasons, cannot be answered. The replies will appear on this page within a reasonable time.

PENNSYLVANIA QUALITY LUBRICANTS

Are all of the oils sold on the market today as Pennsylvania oils really made from Pennsylvania crude? Explain what is meant by a Pennsylvania base crude. What is meant by long residuum oils? Is there enough oil produced in the Eastern Field to supply all of the oil sold on the market as Pennsylvania oils? Is it a detriment to add to an oil some substance to lower the cold test of an oil?—H. H. S.

We have no information showing the quantity of oil marked Pennsylvania oil or from what crude the lubricating oils sold under a brand name have been manufactured. See this page, issue of March 17, 1932.

What is known as the Eastern district includes the producing fields in New York, Pennsylvania, southeastern Ohio and West Virginia, from which the oil called Pennsylvania grade is obtained. Since this oil is a paraffin base oil the term is frequently applied to paraffin base oils found in other districts; so, for example, a paraffin base oil produced in the Mid-Continent district may be classified as a Pennsylvania grade oil.

The daily production of the Eastern district ranges between 60,000 and 80,000 bbls., which may yield about 20 per cent lubricating oil. Assuming an average of 70,000 bbls. for a year this would make a total of 25,550,000 bbls. of petroleum and equivalent to a yield of 5,110,000 bbls. of lubricating oil. During the year 1930 there were 34,201,000 bbls. of lubricating oil manufactured in the United States from all crudes and 432,431,000 bbls. of motor gasoline, the yield of lubricating oil being equivalent to 7.87 per cent of the gasoline. The consumption of motor lubricating oils amounts to between 2.25 and 2.50 per cent of the gasoline used, so the rest of the lubricating oil manufactured is used for other purposes than in the automotive industry, is exported, and remains in storage as excess stocks.

Long residuum oil is the dewaxed product which contains in addition to the heavy steam refined stock, also a portion of the oil that would ordinarily be produced as wax distillate. The dewaxed long residuums are made in numerous grades, from the several crude oils, and these may range in Saybolt Universal viscosity from about 60 to 110 seconds at 210° F. The long residuum oils may be blended in various ways to make the oils conforming to the specifications for the commercial lubricating oils ranging from the medium to the extra heavy motor oils. Long residuum oils are less viscous than the bright stocks and consequently blend more readily with the neutrals and do not require so high a temperature when making the mix.

The product Paraflow when added to a lubricating oil for the purpose of lowering the cold test is reported to have no objectionable action on the oil or on the lubricated surface.

ODORIZING GAS FORMULAS

What are the substances now used for odorizing gas supplies and how is the amount regulated when introducing the odorant into a gas system?—B. T. L.

The use of the odorant developed in California, which was described in The Oil and Gas Journal, June 4, 1931, page T-125, known as Calodorant, is controlled on the basis of equilibrium vapor pressure; that is, the maximum pressure in pounds absolute at which all components of the mixture are completely vaporized. The equilibrium vapor pressure being calculated from the air odorant ratio. The device for injecting the odorant consists of a small orifice, through which the liquid odorant passes into the gas stream, connected in parallel with an orifice in the gas line in such a way that the differential pressure across the liquid orifice was always the same as the differential pressure across the gas orifice. Hamilton and Rutherford give, in the above reference, an example of the calculation.

Odorant: Specific gravity, .813. Molecular weight, 118. Equilibrium established at 60° F. Odorant rate, 1.61 c.c. per minute. Air rate, 9.70 cubic feet per minute. Equivalent cubic feet per gallon of odorant vapor at 60° F. and 14.7 pounds per square inch.

$$= \frac{359}{118} \times \frac{460 + 60}{492} \times .813 \times 8.33 = 22.3 \text{ cu. ft.}$$

Since there are 3,785 c.c. per gallon, this equals

$$\frac{1.61}{3{,}785} = .000425 \text{ gal. per min. of odorant fed}$$

$$= .000425 \times 22.3 = .00948 \text{ cubic foot per min. of odorant vapor.}$$

The mol fraction of odorant is the number of cubic feet of odorant divided by the total cubic feet of mixture.

$$\text{Equilibrium vapor pressure at 60° F.} = \frac{.00948}{9.70} \times 14.7 = .0144 \text{ pound per sq. in.}$$

$$\text{Volatility at 250 pounds per sq. in. and 60° F.} = \frac{.0144}{(250 + 15)} \times 1{,}000{,}000 = 54.4$$

cu. ft. odorant vapor.

$$\text{or } \frac{54.4}{22.3} = 2.44 \text{ gallons per 1,000,000 cu. ft. of gas.}$$

One pound of ethyl mercaptan per million imparts a strong odor to ordinary natural gas but dilutions of one part in a billion parts of air may be detected by the odor. The quantity of odorant introduced into a gas distributing system should be maintained at a nearly constant ratio.

The size of the odorant liquid orifice may be calculated by either of two methods, first from the size of the gas line orifice, or second from the value of the differential pressure. These formulas, as explained by Thompson and DeBurn, Western Gas, VIII, 42, 1932, are outlined.

First formula:

$$d_2 = 0.00111 \times d_1 \times \sqrt{G} \sqrt[4]{P}$$

where

d_2 = the diameter of the odorant orifices, inches

d_1 = the diameter of the gas orifices, inches

G = gallons of odorant per 1 MM. cu. ft. of gas

P = absolute pressure of gas, lbs. per sq. in.

Second formula:

$$d = 0.0000667 \frac{\sqrt{R \times G}}{\sqrt[4]{h}}$$

R = Rate of flow of gas (cu. ft. per hr.)

h = Differential in inches of water across liquid orifice.

The formulas are calculated for 0.6 gravity gas and for an odorant gravity of 40 degrees A.P.I. Variations from these values will, of course, alter the constant in the formulas.

The odorant gas ratio may be readily checked by means of a calibrating tube in the apparatus. This value is calculated from the following formula:

$$G = \frac{3{,}600{,}000{,}000 \text{ V}}{\text{T X R}}$$

where

V = Volume of calibrating tube (in gals.)

R = Rate of flow gas (cu. ft. per hour)

T = Observed time required for calibrating tube to fill (in seconds)

G = gallons of odorant being added per 1,000,000 cu. ft. of gas.

PRECIPITATE IN KEROSENE

Our 40.5 to 41.5 kerosene made from East Texas crude is cloudy from moisture and a flocculent precipitate which will not all settle out. We are running at 550° F. with steam in the still and steam at the top of the tower. The kerosene direct from the still at 120° F. is clear but when cooled to 40-60° has this cloud. It can be filtered out but on standing the oil becomes cloudy again. Is it possible for this to be due to the high paraffin content of this crude? Will a filter of glass-wool, wire cloth or fuller's earth help?—J. A. R.

There are several conditions that may result in the formation of cloud and precipitates in kerosene; it is impossible for one to explain just what may be the reason for this particular trouble without knowing all of the local details.

The quality of the crude oil, conditions of distillation, and the many details of the treating process, including the purity of the chemicals, should be considered as having a material relation to any precipitate forming in the final product. Water, litharge and lead precipitates, sulphur and wax are the common causes of cloudiness. The crude oil may be run to the still with a small quantity of salt water, the chlorides from this decomposing under heat to produce small quantities of acid. This acid, if not removed from the distillate, tends to act on the sulphur compounds to form free sulphur and this will make a cloudy oil. When the cloudy condition is caused by water a slight warming or standing in storage will cause the water to separate and settle. Frequently too much agitation, or too short a time for settling, during the treatment with the doctor solution will result in small quantities of litharge being carried over together with particles of the lead sulphide precipitate. This will produce a precipitate which is difficult to remove without filtering through fuller's earth. Short treating may produce an unstable product, which upon slight oxidation will cause the kerosene to become acid and then through the decomposition of the sulphur compounds, sulphur is set free to form a cloud or milky precipitate.

The quantity of kerosene obtainable from East Texas crude is comparatively small, so if the still is pushed in an effort to get a good yield it may be possible to carry over some of the wax. The quality of the steam used at the top of the tower may have something to do with the formation of the cloud as steam frequently contains chemicals and traces of lubricating oil. You might introduce the steam somewhat lower in the tower.

It is not thought that glass-wool or screen filters will be of any service, but the use of fuller's earth may help. However, the better plan would be to locate the trouble so that you may proceed without doubt as to the outcome.

INSTIL REFINING PROCESS

Have you a description of what is known as the Instil Treating Process, which, I am informed, does not require the use of sulphuric acid when treating distillates for gasoline and naphtha?—R. S.

The Journal Institution Petroleum Technologists, 17, 267A, 1931, has an abstract from the Gas World 94 (2431), 12-16, 1931, describing Instil process, stating that the process aims at the elimination of the use of sulphuric acid in the purification of crude benzol, low temperature oil, shale oil, etc., intended for use as motor fuels. It is claimed that the process increases yields of finished products by the removal of only a part of the unsaturated hydrocarbons.

The article abstracted deals mainly with the refining of coke-oven benzols. Briefly, the process is as follows: The crude benzol from the debenzoling still, once run if necessary, is freed from pyridine and like bases by treatment with sulphuric acid, or in a continuous pyridine scrubber on its passage to the washer.

The base-free spirit is treated at 55° C. (131° F.), with 2 to 3 per cent of Instil refining medium. After agitation at this temperature for 90 minutes, the benzol and entrained medium is filtered and neutralized, passing to the still for rectification.

The Instil refining medium consists of: (1) Ferric sulphate, which polymerizes the diolefins and has a catalytic and oxidizing effect; (2) absorbent earth which keeps the medium in fine state of division, also absorbs sulphur; (3) free sulphuric acid which amounts to 4 to 5 per cent of medium and is present to prevent the ferric sulphate becoming basic on storage.

The spent medium is a dark colored, inoffensive powder easily disposed of, a more desirable waste product than the noxious acid-tar obtained with acid refining.

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Write for suggestions, catalog and prices.

TRUSCON STEEL COMPANY, Youngstown, Ohio
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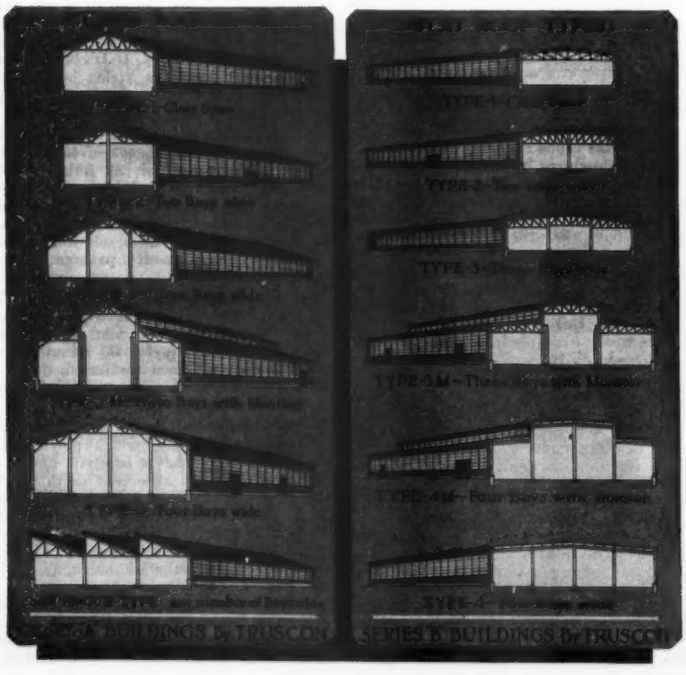


WILDCAT OPERATIONS IN LOUISIANA-ARKANSAS

(Continued from Page 35)

R. L. Gay, tr.'s No. 1-A Long Bell Lbr. Co., 430 ft. S, 200 ft. W, NE cor. NW NW, Sec. 10-8-13 ..... Arranging to shut off S.W. at 4,712 ft.
J. I. Hall's No. 1 Williams, SE NW, Sec. 3-7-10 ..... Drlg. 1,070 ft.
Root Ref. Co.'s No. 1 Peterson, 330 ft. N and E of C, Sec. 24-7-13 ..... Drlg. 2,750 ft.
Geo. LeGrand's No. 1 McGough, Sec. 3-8-10 ..... Derrick.
J. J. Keen, tr.'s No. 1 Belton (no check), Sec. 31-9-13 ..... S.D. 3,120 ft.
A. D. King, tr.'s No. 1 Germain, Sec. 7-7-10, 330 ft. E, 518 ft. N, SW cor. NE NE ..... Set 10-in. 104 ft.
W. F. Lacey's No. 3 McNeely, Sec. 14-7-11, 300 ft. S and E, NW cor. NE NE ..... Derrick.
Jack Lanier's No. 1 Petty, Sec. 11-7-11, 330 ft. N and W SE cor. NE SE ..... Derrick.
Mays et al's No. 1 Delong, Sec. 5-7-10, 275 ft. N, 175 ft. W, SE cor. SE SW ..... Derrick pattern.
E. F. Neely's No. 1 Cobb & Alford, Sec. 14-7-11, 200 ft. S, 100 ft. E, NW cor. NE SW ..... W.O.S.R. 2,485 ft.
E. F. Neely's No. 2 Clanan, Sec. 14-7-11, 500 ft. N, 100 ft. W, SE cor. SE NW ..... Set 6-in. 2,434 ft.
C. E. Neff, tr.'s No. 1 Snell, Sec. 9-7-11, 350 ft. N, 660 ft. W, SE cor. Sec. ..... Derrick.
Palmer & Smitherman's No. 1 La. Long Leaf Lbr. Co., Sec. 12-7-11, 330 ft. S and E, NW cor. NE SE ..... Location.
Palmer & Smitherman's No. 2 La. Long Leaf Lbr. Co., 330 ft. S and W, NE cor. NE SE, Sec. 12-7-11 ..... Location.
Palmer & Smitherman's No. 3 La. Long Leaf Lbr. Co., 330 ft. S and W, NE cor. NE SW, Sec. 12-7-11 ..... Location.
J. F. Palmer's No. 1 Davis, Sec. 17-7-10, 200 ft. S and E, NW cor. NE NW ..... Location.
H. W. Perritt's No. 1 Brown Lbr. Co., Sec. 6-7-10, 330 ft. N and E, SW cor. SW SE ..... Tested dry 2,618 ft; W.O.
Rowe et al's No. 1 Williams, Sec. 13-7-11, 600 ft. S, 40 ft. E, NW cor. SW ..... Tested dry 2,644 ft; W.O.
Scully & Beach's No. 1 Lafitte, Sec. 13-7-11, 100 ft. S, 660 ft. E, NW cor. NW ..... Rigging up.
H. R. Smith et al's No. 1 La. Long Leaf Lbr. Co., Sec. 12-7-11, 330 ft. S and W, NE cor. NW SW ..... Location.
H. R. Smith et al's No. 2 La. Long Leaf Lbr. Co., 330 ft. N and W, SE cor. NW SW, Sec. 12-7-11 ..... W.O.S.R. 2,536 ft.
J. E. Smitherman's No. 1 Smith, Sec. 7-7-10, 330 ft. S and E, NW cor. NW SW ..... S.D.; W.O. 3,014 ft.
Southland Drlg. Co.'s No. 2 F. Martinez, Sec. 11-7-13, 330 ft. S and E, NW cor. NE NW ..... Derrick pattern.
Southland Drlg. Co.'s No. 1 Gilbert Martinez, Sec. 2-7-13, 330 ft. N and W, Sec. cor. SW SW ..... Derrick pattern.
State Prod. Co., Inc.'s No. 1 Davis, Sec. 17-7-10, 150 ft. N and E, SW cor. SW NW ..... Derrick pattern.
A. F. Tarver's No. 3 Cutrer, Sec. 12-7-11, 1,130 ft. E, 300 ft. N, SW cor. NW ..... Set 6-in. 2,448 ft; drlg. 2,550 ft.
The Texas Co.'s No. 2-B Grauque, Sec. 10-7-13, 1,700 ft. W, 330 ft. S, NE cor. Sec. ..... Derrick.
C. H. Tuttle's No. 1 Travis, Sec. 13-7-11, NE NW ..... Dry and abd. 2,595 ft.
Williams & Spiers' No. 1 Williams, Sec. 31-8-10, SE cor. SE SW ..... Location.

TENSAS PARISH

A. R. Willis et al's No. 1 Currey, 1,320 ft. S, 1,320 ft. E, NW cor., Sec. 39-11-12 ..... S.D. 3,545 ft.

WEBSTER PARISH

J. K. Wadley's No. 1 Matthews, Sec. 11-23-9, 130 ft. N, 330 ft. E, SW cor. SW NE ..... Drlg. 1,550 ft.

ARKANSAS

COLUMBIA COUNTY

Kendall Oil Co.'s No. 1 Fullenwelder, Rhea & Kitchen, Sec. 13-17-22 ..... S.D. 814 ft.

CLAY COUNTY

S. C. Jeffus' No. 1 Underwood, 510 ft. N, 350 ft. W, C, NW SE, Sec. 4-20-3 ..... S.D. 1,350 ft.

CLEVELAND COUNTY

Crum & Stillwell's No. 1 E. R. Bell, Sec. 10-10s-12 ..... Rigged up and S.D.

CLEBURNE COUNTY

(Cable tools)

Donnelly-Craver et al's No. 1 Donophan Lbr. Co., SE cor. NW, Sec. 33-11-9 ..... S.D. 3,740 ft.

DALLAS COUNTY

J. H. James, tr.'s No. 1 Fordyce Lbr. Co., 200 ft. S, 200 ft. E, NW cor. SE, Sec. 11-9-15 ..... D.S. stuck 2,575 ft.
Zepp O. & G. Co.'s No. 3 Hillman, Sec. 20-10-13, 180 ft. N, 450 ft. E, SW cor. NW NE ..... Location.

DREW COUNTY

Co-Operative Dev. Co.'s No. 1 Ogles, Sec. 35-15-5, 330 ft. S and E, NW cor. NE NW ..... S.D. 1,890 ft.

HOT SPRINGS COUNTY

Star Oil Co.'s No. 1 Cunningham, 285 ft. S, 285 ft. W, NE cor., Sec. 11-5-16 ..... Washing to bottom 1,300 ft.

LINCOLN COUNTY

Lawrence Cook, tr.'s No. 1 McGhee Planting Co., 420 ft. S, 200 ft. W, NE cor. NE SW, Sec. 5-8-7 ..... S.D. 2,800 ft.

LITTLE RIVER COUNTY

Roberts Oil Co.'s No. 1 H. J. Russell, 330 ft. E, 330 ft. S, NW cor., Sec. 35-13-19 ..... Location.

LOGAN COUNTY

J. H. Flowers' No. 1 J. H. White, Sec. 13-6-26 ..... S.D; W.O. 3,570 ft.

MILLER COUNTY

W. R. Noel et al's No. 1 Dickson hrs., 1,980 ft. W, 660 ft. S, NE cor., Sec. 11-20-27 ..... S.D. 1,955 ft.

OUACHITA COUNTY

Copenhaven et al's No. 2 Berg, C SE SE, Sec. 13-15-17 .. Fishing for D.S. 2,011 ft.
McLean et al's No. 1 L. D. Neely, Sec. 23-15-16, 300 ft. N and W, SE cor. NE SW ..... S.D. 102 ft.

PIKE COUNTY

E. R. Henderson's No. 1 Tilyou, 660 ft. W, 500 ft. S, NE cor. NE SE, Sec. 26-8-14 ..... T.A. 2,909 ft.
E. R. Henderson's No. 1 J. L. Lee, 400 ft. S, 350 ft. E, NW cor. SW SE, Sec. 21-8-24 ..... S.D; W.O. 1,020 ft.
E. R. Henderson's No. 1 W. B. East, 300 ft. S, 150 ft. W, NE cor., Sec. 13-9-23 ..... Skidding over; to drill new hole.

PRAIRIE COUNTY

Powell Creek O. & G. Co.'s No. 1 Kloss, NE SW, Sec. 3-4n-6w ..... Partly rigged up and S.D.

SCOTT COUNTY

Heavener O. & G. Co.'s No. 1 Riser, Sec. 36-4-26 ..... S.D; T.D. 1,436 ft.
Waldron O. & G. Co.'s No. 1 White, NE cor. SW NW, Sec. 17-3n-29 ..... S.D. 1,860 ft.

SEVIER COUNTY

Tristate Oil Co.'s No. 1 Grimble, Sec. 34-8-22, 8½ SW ..S.D. 950 ft.

ST. FRANCIS COUNTY

Field & Jones No. 1 F. M. White, Sec. 1-4n-2e, SW cor. NW ..... S.D. 700 ft.

UNION COUNTY

Drillers Oil & Dev. Co.'s No. 1 Pickering, 220 ft. N, 668 ft. E, SW cor. NW NE, Sec. 1-17-16 ..... T.A. 2,134 ft.
Drillers Oil & Dev. Co.'s No. 1 Haynie, Sec. 1-17-16, 200 ft. S, 300 ft. E, NW cor. NW SE ..... Arranging to set 4½-in. 2,138 ft.
H. H. Helms' No. 1 C. H. Murphy, NE cor. NW NE, Sec. 31-16-14 ..... Drlg. sandy lime 2,875 ft.
L. M. Hill et al's No. 1 J. W. Barnes, Sec. 21-19-16, NE cor. Sec. ..... Derrick.
Sunby et al's No. 2 Perdue, Sec. 33-16-14, 75 ft. S, 150 ft. E, NW cor. Sec. ..... Rebuilding derrick 1,690 ft.
Wilson & Chapman's No. 1 King, Sec. 3-18-13, 330 ft. N and E, SW cor. NE NE ..... Derrick.
Wilson & Chapman's No. 1-A D. Norman, 330 ft. S and E, NW cor. N½ NE SE, Sec. 3-18-13 ..... Derrick.

Wilson & Chapman's No. 1 K. D. Parker, Sec. 3-18-13, 330 ft. N and E, SW cor. 8½ NE SE .....Set 6⅝-in. 3,560 ft.

WASHINGTON COUNTY
(Cable tools)

C. H. Willoughby's No. 1 Jones, Sec. 34-16-30.....S.D. for funds 1,795 ft.

YELL COUNTY
(Cable tools)

Tegmeier & Luckett's No. 1 Falcon, Sec. 36-7-21.....S.D. 5,710 ft.

EAST TEXAS

BOWIE COUNTY

Logan & Elliott's No. 1 Smith, 9,600 ft. S, 2,500 ft. W, NE cor. Chas. Lewis Sur. .....S.D. 4,505 ft.
Tarkington & Jones' No. 1 W. W. Whybark, 200 ft. S, 200 ft. W, SW cor. J. H. Dyer Sur. .....S.D. 1,880 ft.
Lee Timberlake et al's No. 2 Tidwell, 2,510 ft. N, 655 ft. W, SE cor. T. M. Rice Sur. .....S.D. 3,000 ft.

CASS COUNTY

J. F. Morrisey's No. 1 T. J. Wilson, 1,088 ft. S of N line, 2,376 ft. E of W line of H.R.S., J. R. McFarland Sur. .....S.D. 3,670 ft.
Davis & Pigg's No. 1 Roy Bryan, SW cor. Roy Bryan 88-ac. tr., Albert H. Lattimer Sur. .....S.D. 2,360 ft.
Wm. S. King's No. 1 T. R. Richey, 1,450 ft. N, 1,600 ft. W, SE cor. Lavinia Morenew Sur. .....Drlg. chalk 2,138 ft.
C. E. Murdock's No. 1 First National Bank, Evans Watson Sur. .....S.D. 4,390 ft.
John C. Rogers' No. 1 I. E. Lanier, 573 ft. N, 879 ft. W, SE cor. Lanier 56 ac. in K. E. Welborn Sur. ....S.D. 2,280 ft.
Olds & King's No. 2 Anthony, John C. Byers Sur. ....S.D. 1,760 ft.
John C. Rogers et al's No. 1 W. Q. Henderson, 3,100 ft. S, 3,100 ft. E, NW cor., Wm. Davis Sur. .....S.D. 960 ft.

HARRISON COUNTY

Gochee et al's No. 1 Davidson, NW cor. R. W. Starr Sur..Set 10-in. 105 ft; drlg. 350 ft.
Lloyd Oil Corp.'s No. 1 E. S. Timmons, 150 ft. from N line to 250 ft. from E line of 105-ac. tr., Findley Sur. .....S.D. 4,195 ft.
Ryan Cons. Pet. Corp.'s No. 1 J. M. Fuhr, 1,300 ft. N of NW cor. T. J. Copelin Sur., 1,675 ft. SW at right angles to NW SE line of O'Neal Sur. .....Derrick.

MARION COUNTY

Baunoch Dev. Co.'s No. 1 Miller, 725 ft. N, 1,470 ft. E, SW cor. H. Fulgram Sur. (was Gist, Claunch & Dodson) .....S.D. 3,346 ft.
Geo. Hindeman et al's No. 1 F. V. Lindsey, 2,500 ft. S, most northerly N line, 3,555 ft. E most easterly W line, Alexander Albright Sur. .....S.D. 3,380 ft.

PANOLA COUNTY

Hoffer et al's No. 1 Cameron Lbr. Co., center 1,306-ac. tr. in W. M. A. LaGrove Sur. .....Derrick.
Moses & Wallace's No. 1 Daniel, 600 ft. N and W lines, Mrs. Gerrell 100-ac. tr., SW cor. Isabel Hanks Sur...Spudded and S.D.
G. A. Davidson's No. 1 Latham, Wm. Rich. Sur. .....S.D. 2,394 ft.
J. L. Nelson et al's No. 1 J. W. Williams, 300 ft. S, 700 ft. W, NE cor. Williams' 67-ac. tr. in James Hanks Sur. .....S.D. 3,055 ft.
United Prod. Co.'s No. 2 Werner, 1,350 ft. N, 542 ft. E, SW cor. 95-ac. tr., B. C. Jordan Sur. .....Set 7-in. 2,784 ft; T.D. 2,912 ft.

RED RIVER COUNTY

D. M. Buffington's No. 1 Hossier, E. Hughhart Sur. ....S.D. 2,795 ft.
Johnson Pet. Co.'s No. 2 Randolph, Edw. Dean Sur. ....S.D. 2,280 ft.

SHELBY COUNTY

Chapperell Oil Co.'s No. 2 Holt, Matthew Moore Sur. ...S.D. 3,225 ft.
Harry Elliott's No. 1 Pickering Lbr. Co., 1,000 ft. N, 150 ft. E, SW cor. 361-ac. tr., G. H. Patterson Sur...Pumping 50 bbls. 1,543 ft.
Fuller & O'Brien Bros.' No. 1 Frost-Johnson Lbr. Co., 200 ft. S, 150 ft. W, NE cor. 168-ac. tr., Aaron Castleberry Sur. .....Drlg. 1,070 ft.
K. H. Francis' No. 1 John Mims, Mary Smith Sur. .....S.D. 3,382 ft.
H. H. Gracey's No. 1 J. A. Morrison, 1,500 ft. N, 200 ft. E, SW cor. J. A. Morris' 109-ac. tr., William English Sur. .....S.D. 2,600 ft.
Henry Maulding's No. 1 Frost Lbr. Co., NE cor. Frost Lbr. Co.'s 80-ac. tr., A. D. Fountain Sur. .....S.D. 3,246 ft.
McRoby et al's No. 1 Windham, Wm. Leach Sur., on Windham 296-ac. tr. .....S.D. 3,393 ft.
Ridgeway et al's No. 1 Polley, Dominguez Gonzales Sur., 3,180 ft. E of SW cor., 160 ft. N at right angles of Polley 457-ac. tr. .....S.D. 822 ft.
Sedberry et al's No. 1 Pickering Lbr. Co., 600 ft. N, 400 ft. E, SW cor. Jane Stoddard Sur. .....Rigging up.
C. H. Tautenhahn's No. 1 J. C. Bogard, 300 ft. S, 900 ft. E, NW cor. J. C. Bogard's 52-ac. tr., Thomas Baker Sur. .....S.D. 20 ft.
Western World's No. 1 Foster, Billingsby-Jeremiah Bowlin Sur. .....S.D. 2,460 ft.
Wray & Dunbar's No. 1 C. A. Hayden, 600 ft. N and W SE cor. 152-ac. tr. in D. T. F. Yordt Sur. .....Rigging up.

WILDCAT OPERATIONS IN OKLAHOMA

(Continued from Page 33)

C. Kennedy's No. 1 Travis, C SW NE Sec. 15-7-14 .....Rig.
C. Canady's No. 1 Jones, NW cor. Sec. 14-8-14 .....Rig.

POTTAWATOMIE COUNTY

Clara Oil & Gas Co.'s No. 1 Unknown, SW NW NE, Sec. 1-9-4 .....Rig.
Barnsdall et al's No. 1 Gray, NE SW Sec. 25-6-4 .....Drlg. 3,210 ft.

ROGER MILLS COUNTY

Ute Oil Co.'s No. 1 Williams, C SW Sec. 23-12-24w.....S.D. 5,150 ft.
L. C. Hivick's No. 1 Davis, C NW NE Sec. 4-11-26w.....S.D. 3,420 ft.

WASHITA COUNTY

Miley Pet. Co.'s No. 1 Wolfe, NE SW Sec. 23-9-17w.....Rig.
Cooper & Terhune's No. 1 Blocker, NW cor. Sec. 29-8-19w .....Drlg. 2,740 ft.; show oil 2,459-67 ft.; S.D. 2,757 ft.
Burns & Prince's No. 1 Deck, SW cor. Sec. 21-8-18 .....S.D. 1,265 ft.

OKLAHOMA PANHANDLE

TEXAS COUNTY

Three Way Oil Co.'s No. 1 Crane, SW NW Sec. 11-1-1E...T.D. 4,720 ft.; to cement.

SOUTHERN OKLAHOMA

ATOKA COUNTY

Brookshire's No. 1 R. W. Rowland, NW NE SE Sec. 18-3s-10 .....S.D. 1,720 ft.

BRYAN COUNTY

Bryan County Oil's No. 1 Childs, NW SE SW Sec. 7-7-10..T.D 650 ft.
Bush et al's No. 1 Commerce Trust, NE cor. Sec. 35-6s-9 .....T.D. 740 ft.; plugged back to 450-80 ft.

CARTER COUNTY

Lundy's No. 1 Spraggins, C NE NW SW Sec. 8-1s-2w ....S.D. 2,500 ft.

JEFFERSON COUNTY

Smith's No. 1 McCarty, SE NW NE Sec. 18-4s-8w .....Location.

MARSHALL COUNTY

Starrett et al's No. 1 Henry, NE NW Sec. 32-7s-6 .....Drlg. 535 ft.
Everett et al's No. 1 Agres, SE NE Sec. 14-7s-6 ..... S.D. 1,170 ft.
Newman et al's No. 1 Henry, NW cor. Sec. 22-7s-6.....Rig.

McCURTAIN COUNTY

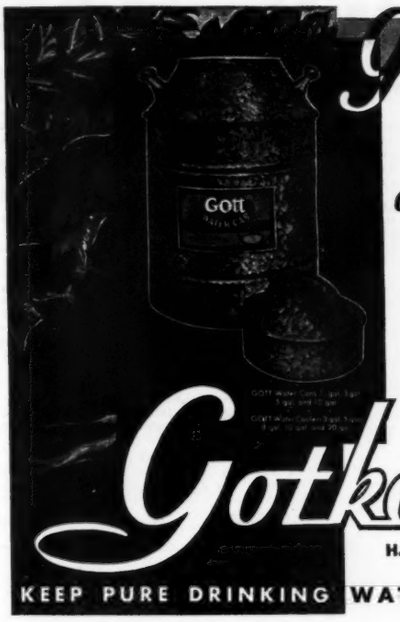
Prassell et al's No. 1 Wagoner, SE NE Sec. 5-8s-27.....Drlg. 451 ft.
Stampfs et al's No. 1 Harris, SW NW SW Sec. 14-9s-25..S.D. 2,731 ft.
Stewart's No. 1 Patterson, C SE SE Sec. 7-6s-24 .....S.D. 1,411 ft.

PUSHMATAHA COUNTY

Whitehead et al's No. 1 Messer, SE SW SW Sec. 35-3s-18 .....Drlg. 1,250 ft.

STEPHENS COUNTY

Brown's No. 1 Hightower, SW SE NE Sec. 15-3s-5w.....Sand 990-1,004 ft; S.O; S.D.
George's No. 1 Ryan, NW SW NE Sec. 31-3-15.....S.D. 510 ft.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Oklahoma-Kansas and Eastern Pipe Line Report

OKLAHOMA-KANSAS
Pipe Line Statement for January

Runs

	Month (bbls.)	Dy.av. (bbls.)
Prairie P. L. Co.*	579,700	18,700
Gulf P. L. Co.	1,524,401	49,174
Texas P. L. Co.	543,721	17,539
Magnolia P. L. Co.	1,679,336	50,962
Empire P. L. Co.	2,010,159	64,844
Cosden P. L. Co.	613,381	19,786
Stanolind P. L. Co.*	3,162,000	102,000
Oklahoma P. L. Co.	2,069,871	66,770
Other lines	4,774,000	154,000
Total January	16,857,069	543,776
Total December	19,796,955	638,611
Difference	2,939,886	94,835

Shipments

Prairie P. L. Co.	1,862,326	60,075
Gulf P. L. Co.	1,792,661	57,828
Texas P. L. Co.	643,195	20,748
Magnolia P. L. Co.	965,558	31,147
Empire P. L. Co.	1,870,655	60,344
Cosden P. L. Co.	688,035	22,195
Stanolind P. L. Co.	3,335,755	107,605
Oklahoma P. L. Co.	2,091,388	67,464
Other lines*	3,007,000	97,000
Total January	16,256,583	524,406
Total December	19,355,129	624,359
Difference	3,098,546	99,953

Stocks

	Bbls.
Prairie O. & G. Co.*	35,341,000
Gulf P. L. and Gypsy Oil Co.	7,726,629
The Texas Company	3,664,036
Magnolia Petroleum Co.	8,474,950
Empire P. L. Co.	4,729,405
Mid-Continent Petroleum Corp.	3,331,434
Stanolind Crude Oil Pur. Co.*	16,250,000
Oklahoma P. L. Co.	1,278,698
Carter Oil Co.	6,161,813
Other lines*	15,166,000
Total January	102,134,015
Total December	102,072,356
Difference	61,709

*Estimated.

EASTERN PIPE LINE REPORT FOR MONTH OF FEBRUARY

Runs from Wells

In the following table will be found the regular receipts from wells by various pipe lines in New York, Pennsylvania, West Virginia, Ohio, Kentucky, Illinois, Indiana and Michigan for January and February:

	Jan., '32	Feb., '32
Nat. Transit	132,346.98	126,753.33
S. W. Pa. P. L.	64,883.40	58,939.34
Eureka P. L.	244,733.46	242,556.95
Buckeye P. L. (Macksburg)	231,436.17	220,174.62
Buckeye P. L. (Cleveland)	13,765.55	10,650.06
Buckeye P. L. (Lima, etc.)	70,902.03	69,769.97
Indiana P. L.	2,957.69	2,432.39
N. Y. Transit	42,434.50	42,479.85
Tide Water P. L.	21,527.15	23,346.91
Pure Oil	343,184.55	291,502.56
Stoll Oil Ref.	61,955.78	60,332.05
Bradford Tran.	409,404.66	358,619.95
Ashland Ref.		101,901.07
Total	1,658,521.92	1,609,459.55
Daily avg.	53,501.03	55,498.61

Petroleum Deliveries

The following table exhibits the shipments or regular deliveries in New York, Pennsylvania, West Virginia, Ohio, Kentucky and Indiana for January and February:

	Jan., '32	Feb., '32
Nat. Transit	546,544.24	521,574.93
S. W. Pa. P. L.	327,706.71	393,740.87
Eureka P. L.	266,908.78	284,915.43
Buckeye P. L. (Macksburg)	247,543.60	197,422.31
Buckeye P. L. (Cleveland)	1,710.80	1,468.37
Buckeye P. L. (Lima, etc.)	1,483,164.35	1,356,890.69
Indiana P. L.	720,776.96	684,053.57
Southern P. L.	45,091.84	29,866.72
N. Y. Transit	160,691.41	164,942.57
Northern P. L.	167,659.31	149,660.95
Tide Water P. L.	582,162.04	373,538.58
Pure Oil	322,591.73	323,613.38
Bradford Tran.	604,570.61	252,933.43
Tuscarora	306,988.46	291,210.02
Total	5,783,109.33	4,925,830.92
Daily avg.	186,551.91	169,856.24

Gross Stocks

The gross stocks held by various pipe lines in the oil-producing sections of New York, Pennsylvania, West Virginia, Ohio, Indiana and Kentucky at the close of January and February:

	Jan., '32	Feb., '32
Nat. Transit	708,300.22	714,830.78
S. W. Pa. P. L.	452,222.36	404,242.41
Eureka P. L.	1,218,191.97	1,260,183.19
Buckeye P. L. (Macksburg)	285,000.33	286,436.07
Buckeye P. L. (Cleveland)	38,136.48	47,411.90
Buckeye P. L. (Lima, etc.)	2,936,849.21	2,956,771.37
Indiana P. L.	520,692.84	513,552.31
Cumberland P. L.	64,500.81	
Southern P. L.	258,415.23	241,444.27
N. Y. Transit	198,406.61	196,495.84
Northern P. L.	324,194.35	306,733.15
Tide Water P. L.	974,418.35	863,043.42
Pure Oil	887,230.61	889,617.33
Tuscarora	10,920.31	10,306.74
Bradford Trans.	156,443.32	338,731.30
Total	9,022,914.45	8,974,350.13
Decrease	95,118.08	49,564.32

Grades of Oil

The following table shows the amount of the different grades of oil held by the Eastern pipe lines at the close of January and February, showing gross stocks of the above fields:

	Jan., '32	Feb., '32
Penna.	3,219,630.21	3,178,872.84
Lima	602,805.09	599,253.26
Kentucky	74,908.32	10,011.59
Mid-Continent	4,306,150.37	4,329,220.63
Illinois		22,590.53
Michigan	820,420.46	834,401.29
Total	9,023,914.45	8,974,350.13

Daily Average Runs

The following table shows the daily average runs of the Pennsylvania, Lima and Kentucky oil fields for the past four years:

	1929	1930	1931	1932
Jan.	51,749	75,907	53,939	53,501
Feb.	51,333	79,256	55,163	55,498
Mar.	54,252	76,688	54,331	.....
April	58,444	84,536	54,914	.....
May	59,903	70,546	53,344	.....
June	58,833	75,430	54,110	.....
July	66,087	68,921	50,723	.....
Aug.	66,087	64,291	51,503	.....
Sept.	67,315	56,595	51,345	.....
Oct.	76,093	55,179	55,595	.....
Nov.	74,831	52,333	59,819	.....
Dec.	74,561	53,999	61,335	.....

Daily Average Shipments

The following table gives daily average shipments from the Pennsylvania, Lima and other fields for the past four years:

	1929	1930	1931	1932
Jan.	165,721	217,623	175,369	186,551
Feb.	159,337	224,355	183,494	169,856
Mar.	161,474	228,846	189,508	.....
April	169,737	241,845	191,450	.....
May	184,281	248,333	199,247	.....
June	185,404	234,401	221,155	.....
July	194,763	207,094	211,632	.....
Aug.	194,946	205,506	224,166	.....
Sept.	201,214	193,999	217,537	.....
Oct.	191,367	157,675	210,831	.....
Nov.	202,743	146,638	196,435	.....
Dec.	186,257	143,001	176,241	.....

Gross Stocks

In the following table will be found the gross stocks of the various lines of the Pennsylvania, Lima and Kentucky oil fields, including oil received from other lines at the close of each month for the past three years:

	1930	1931	1932
Jan.	12,220,045	11,831,092	9,023,914
Feb.	12,991,561	11,506,489	8,974,350
Mar.	13,247,217	11,012,162	.....
April	13,233,961	11,044,481	.....
May	13,052,953	10,728,239	.....
June	13,396,855	9,903,349	.....
July	13,268,562	9,569,849	.....
Aug.	13,047,051	9,193,457	.....
Sept.	12,812,918	8,492,431	.....
Oct.	12,437,553	8,417,694	.....
Nov.	11,851,380	8,830,386	.....
Dec.	11,751,952	9,119,032	.....

The Illinois Field

The following table gives the report of the Illinois Pipe Line Co. in Illinois:

Gross stocks, March 1	549,565.81
Runs from wells	459,214.59
Regular deliveries	186,010.38
Other deliveries	207,879.42

The amount of Illinois oil run by the Tide Water Pipe Co. in February was 23,346.91 bbls. Deliveries were none. Adding these figures to those of the Illinois Pipe Line Co. makes the runs and deliveries as follows:

1932—	Runs	Deliveries
January	500,177.12	246,634.10
February	482,561.50	186,010.38
1931—		
January	468,429.04	669,573.19
February	429,284.54	461,262.85
March	424,638.23	356,663.38
April	421,814.98	282,532.65
May	433,231.80	322,513.95
June	510,805.78	320,258.12
July	520,009.33	289,219.05
August	476,623.54	393,231.06
September	492,183.83	323,012.50
October	498,124.13	325,834.95
November	470,302.62	281,258.48
December	515,771.28	306,623.19

Tide Water Pipe Co., Ltd., also delivered in February, 496,060.73 bbls. of Oklahoma oil.

AVERAGE DAILY IMPORTS OF CRUDE AND REFINED OIL AT PRINCIPAL UNITED STATES PORTS

Average barrels per day in 1931—	Atlantic Ports: Baltimore	Boston	New York	Philadelphia	Others	Total	Gulf Coast Ports: Galveston	New Orleans, Baton Rouge	Port Arthur, Sabine Pass	Tampa	Total	Total all ports
March	27,645	18,935	141,160	26,290	21,129	235,161	4,065	2,580	.....	1,968	8,613	243,774
April	25,000	16,533	105,000	29,767	35,533	215,833	2,733	3,400	.....	.....	6,133	221,966
May	30,129	8,774	107,000	25,452	26,710	198,065	.....	2,000	.....	.....	2,000	200,065
June	30,067	10,833	111,767	27,000	20,833	200,500	3,300	5,500	2,167	1,333	12,300	212,800
July	26,387	11,226	104,678	29,323	21,778	192,387	6,903	7,419	4,194	.....	18,516	211,903
August	23,613	15,581	91,742	23,387	25,741	188,064	4,161	2,516	.....	2,162	9,839	197,903
September	27,067	7,267	106,867	20,099	22,967	184,267	4,833	8,333	.....	.....	13,166	197,433
October	53,710	14,484	100,774	26,742	40,645	236,355	6,097	6,871	2,097	1,838	16,903	253,258
November	48,033	28,800	51,667	28,600	12,967	170,067	3,933	10,833	3,033	1,367	19,166	189,233
December	30,258	16,806	121,807	31,645	24,258	224,774	1,968	4,355	.....	.....	6,323	231,097
January	19,161	8,161	104,065	24,194	34,903	190,484	4,871	7,226	2,096	1,484	15,677	206,161
February	32,483	16,517	128,483	28,862	34,552	240,897	2,034	5,207	4,310	1,379	12,930	253,827

AVERAGE DAILY RECEIPTS OF CALIFORNIA CRUDE AND REFINED OIL AT ATLANTIC AND GULF PORTS

Average barrels per day in 1931—	Atlantic Ports: Baltimore	Boston	New York	Philadelphia	Others	Total	Gulf Coast Ports: Galveston	New Orleans, Baton Rouge	Port Arthur, Sabine Pass	Tampa	Total	Total all ports
March	10,032	1,611	21,388	7,324	8,774	49,129	.....	.....	.....	.....	6,355	55,484
April	5,133	.....	19,200	16,500	10,067	50,900	.....	.....	.....	.....	4,000	54,900
May	4,452	3,064	19,903	11,226	5,258	44,903	.....	.....	.....	.....	2,355	47,258
June	4,267	.....	25,100	6,333	3,500	39,200	.....	.....	.....	.....	.....	39,200
July	6,774	1,194	24,612	11,065	9,902	53,548	.....	.....	.....	.....	1,235	54,903
August	3,452	.....	16,419	7,419	4,290	31,580	.....	.....	.....	.....	968	32,548
September	4,267	3,667	12,933	4,699	7,367	32,933	.....	.....	.....	.....	4,000	36,933
October	2,355	1,139	19,290	16,709	9,323	48,806	.....	.....	.....	.....	3,323	52,129
November	1,000	.....	22,800	11,567	.....	35,367	.....	.....	.....	.....	3,366	38,733
December	3,161	.....	22,484	5,839	6,032	40,516	.....	.....	.....	.....	7,742	48,258
January	3,871	1,710	14,483	3,774	5,710	29,548	.....	.....	.....	.....	.....	29,548
February	3,069	.....	9,103	4,862	.....	17,034	.....	.....	.....	.....	2,483	19,517

GROSS PRODUCTION OF CRUDE OIL IN THE UNITED STATES FOR 12 MONTHS

(In Barrels of 42 Gallons)

1931—		California	Oklahoma	Texas	Kansas	Arkansas	Louisiana	Rocky Mts.	Eastern	Total
February:	Month	14,930,922	13,531,940	18,957,571	3,341,016	1,402,492	1,981,616	2,747,024	3,139,000	60,031,581
	Daily average	533,248	483,285	677,057	119,322	50,089	70,772	98,108	111,750	2,143,629
March:	Month	16,564,843	16,027,657	21,453,619	3,498,598	1,469,245	2,061,576	2,898,035	3,374,000	68,747,402
	Daily average	527,898	536,377	724,210	112,858	47,395	66,502	93,485	108,839	2,217,065
April:	Month	15,803,541	16,515,990	20,857,717	3,281,880	1,413,220	2,008,021	2,901,870	3,373,000	72,384,239
	Daily average	536,785	559,255	696,257	109,396	47,074	66,934	96,729	109,100	2,412,808
May:	Month	16,443,960	17,333,867	28,703,634	3,341,344	1,446,274	2,222,562	2,998,419	3,190,000	75,800,125
	Daily average	530,612	559,157	926,086	107,786	46,654	72,018	99,949	102,900	2,445,166
June:	Month	15,641,436	16,672,200	29,139,333	3,175,440	1,344,450	1,950,511	2,956,200	3,166,000	73,942,070
	Daily average	521,381	555,940	971,327	105,848	44,815	65,084	98,540	105,533	2,466,069
July:	Month	16,093,222	16,420,080	33,827,213	3,089,832	1,287,586	1,715,730	2,905,909	3,341,000	78,680,671
	Daily average	519,139	529,680	1,091,200	99,672	41,535	55,345	93,739	107,774	2,538,073
August:	Month	15,668,984	9,517,379	32,379,816	3,141,323	1,165,569	1,584,444	2,807,143	3,167,000	69,331,558
	Daily average	505,451	307,009	1,041,284	101,333	37,599	51,111	90,553	102,161	2,236,503
September:	Month	15,180,610	7,946,880	28,981,525	3,147,030	1,138,380	1,541,284	2,761,230	3,032,000	64,439,039
	Daily average	506,020	264,896	966,051	104,901	37,946	54,713	92,041	101,067	2,180,968
October:	Month	15,651,983	12,951,893	30,735,178	3,177,066	1,172,389	1,822,255	2,797,597	3,900,000	72,198,364
	Daily average	504,903	417,803	991,134	102,486	37,819	58,782	90,247	125,807	2,328,979
November:	Month	14,997,700	16,430,730	28,860,561	3,131,670	1,130,700	1,851,577	2,706,390	3,639,000	72,748,328
	Daily average	499,923	547,691	962,018	104,389	37,690	61,719	90,213	121,300	2,424,946
December:	Month	15,560,984	16,598,299	27,767,651	3,198,642	1,082,148	1,971,817	2,816,759	3,645,000	72,641,300
	Daily average	501,967	535,429	903,860	103,182	34,908	63,607	90,863	117,581	2,343,263
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January:	Month	15,532,141	13,695,936	25,744,105	3,169,247	1,064,385	1,696,017	2,822,023	3,566,000	67,290,054
	Daily average	501,037	446,806	830,455	102,237	34,335	54,710	91,033	115,037	2,170,645
Total 12 months		187,875,435	174,549,881	324,333,468	38,693,210	15,115,837	22,417,516	34,248,599	41,022,000	848,254,946
Daily average		514,727	478,219	915,979	106,009	41,413	61,418	93,831	112,389	2,323,984